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Business as Usual:

An Assessment of Donald Rumsfeld's Transformation Vision and Transformation's Prospects for the Future

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Business as Usual:

An Assessment of Donald Rumsfeld's Transformation Vision and Transformation's Prospects for the Future[*]

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Editorial Date: April 2008

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Introduction and Literature Review

Without transformation, the US military will not be prepared to meet emerging challenges.[1]

Quadrennial Defense Review Report (September 30, 2001)

US Military "transformation" is dead…[2]

Reuters News Services Headline (December 7, 2006)

Donald Rumsfeld's vision of a transformed United States military has been discussed by many and understood by few. It is no surprise that this lack of understanding has resulted in both significant simplifications and sweeping generalizations, to include the Reuters headline noted above. Even the term, "Rumsfeld's Transformation," accounts for neither the historical influences that led to his vision, nor the multiple components of this transformational effort.

Donald Rumsfeld did not invent Transformation. Nor was he the sole source of goals to build a high-technology, information-enabled joint military. Soviet military theorists have discussed "Military-Technical Revolutions" since the early 1970s. The conceptual basis for what the Bush Administration hoped to achieve with Transformation is the 1996 publication, *Joint Vision 2010,* a Clinton-era document. However, the facts are that Rumsfeld made Transformation a singular priority and that he pursued the effort with noteworthy zeal. But by 2007, defense language shifted from "transforming" to "recapitalizing" the military. Rumsfeld was out of office and the organizations he created to facilitate Transformation were reabsorbed by the larger Pentagon bureaucracy.[3]

If Rumsfeld's Transformation is indeed dead, does this mean that Transformation as a greater process is dead as well? Answers to such questions require one to understand first that "Rumsfeld's Transformation Vision" is actually the result of multiple influences that predate his time in office. Second, "Rumsfeld's Transformation Vision" is actually an umbrella term for three different things: a new way of war, a process, and a defense strategy. And third, in spite of Rumsfeld's reputation for aggressive leadership, the military services shaped, and at times limited, the effectiveness of his program.

Generic Transformation

In its purest sense, Transformation is neither an end state, nor a modernization program, nor a rapid advancement in technology. Rather, Transformation is a *process*, rooted in a deliberate policy choice, which involves changes in military organizations, cultures, doctrine, training, tactics, and equipment. Transformation is *enabled* by a Revolution in Military Affairs (RMA) and *in response to* a significant change in a nation's security context.[4] Without both the opportunity created by RMA and the challenge presented by changes in the security context, a government's decision to transform its military is either impossible or pointless.

For the United States, and arguably the world, the current RMA includes a myriad of technological improvements, to include advancements in computers, communications, space technologies, and to some degree, manufacturing. These technological improvements manifested themselves with US dominance in stealth technology, precision strike, maneuver (both strategic and tactical), and targeting. The American strategic context reflects its position as the world's only superpower as the Cold War ended as well as the emergence of a more volatile, complex, and uncertain world characterized by

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[1] Department of Defense, *Quadrennial Defense Review Report: September 30, 2001,* (Washington, DC, 2001) p. 16.

[2] Rigby, Bill, "U.S. Military 'transformation' is dead: analysts," *Reuters,* December 7, 2006, http://www.reuters.com/article Print?articleId=USN0725779820061207 (accessed July 25, 2007).

[3] Pudas, Terry, "Embedding Transformation," *Defense News,* September 18, 2006, http://www.oft.osd.mil/library/library_files/ article_526_Defense%20New3.doc (accessed 12 November 2007).

[4] Many thanks to Dr Jack Treddenick for helping me refine this definition via both his "Defense Transformation: The Military Response to the Information Age" course and countless hours of one-on-one discussions. I could not have completed this project without his professional and thoughtful mentorship.

surprise.[5]

Literature Review

Rumsfeld was not alone in his understanding that a revolution in military affairs was in progress and that the strategic context had changed for the United States. As there is extensive academic and governmental literature on the subject of American Military Transformation, the following discussion highlights only a few of the most significant works on the subject and is hardly exhaustive.

As can be expected with efforts like Rumsfeld's push for US military transformation, the US Department of Defense and the military services were prolific in their production of literature on the subject. The value of each piece varies depending upon its intended audience and intended use. Some pieces targeted the young soldier, seaman, marine, or airman and talked about their individual contributions to the effort. Others attempted to explain the process to departmental outsiders and decision-makers in Congress. Still others served as functional references for staff officers and agencies responsible for Transformation's execution.

No analysis of American military transformation would be credible without reference to *Joint Vision 2010* and *Joint Vision 2020*.[6] These documents, produced in 1997 and 2000 respectively, outline the new way of war envisioned by the early corps of transformationalists. They highlight how military conflict would evolve given new technologies over the next 15 to 20 years. They were never intended as policy documents, but rather represented a reasonably coherent and succinct explanation of future military operations following the RMA and America's new strategic context.

Likewise, the 2001 and 2006 *Quadrennial Defense Review Reports*[7] are significant in understanding how the Defense Department perceived itself and its readiness vis-à-vis the American strategic context. These reports are congressionally mandated, with the first produced in 1997, and with the next due in 2009. The 2001 and 2006 versions are most useful, however, in understanding the Rumsfeld-era effort.

Military Transformation: A Strategic Approach is an excellent Rumsfeld-specific resource for understanding the reasons for transformation, its end state, and the broad management model used to achieve success.[8] This publication is accompanied by "Elements of Defense Transformation," although *Military Transformation: A Strategic Approach* is clearly more exhaustive and detailed.[9] Particularly noteworthy are the discussions of the three-part scope of Rumsfeld's transformation program, the leadership process he intended to apply, and what he saw as the emerging way of war. These publications also identify transformation's four pillars, and six operational goals.

For a detailed discussion of the specific goals and tasks associated with Rumsfeld's transformation process, the 2003 document, *Transformation Planning Guidance,* is critical.[10] This document outlines specific organizational responsibilities, tasks, and timelines associated with the effort to include concept development, experimentation, and service-specific plans and products that reflect the core of transformation's institutionalization.

For service-specific thought on transformation, the services' different "Transformation Roadmaps" serve as important references. The *Transformation Planning Guidance* directed that each service produce these roadmaps annually, although production was limited to 2003 and 2004 only. These

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[5] Thanks again to Dr Treddenick.

[6] John M. Shalikashvilli, *Joint Vision 2010* (Washington, DC, 1997), and Henry H. Shelton, *Joint Vision 2020* (Washington, DC, 2000).

[7] Department of Defense, *Quadrennial Defense Review Report: September 30, 2001* (Washington, DC: 2001) and Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: 2006).

[8] Office of Force Transformation (hereafter, OFT), Office of the Secretary of Defense, *Military Transformation: A Strategic Approach* (Washington, DC: 2003).

[9] OFT, Office of the Secretary of Defense, "Elements of Defense Transformation" (Washington, DC: 2004).

[10] Donald Rumsfeld, *Transformation Planning Guidance* (hereafter, *TPG*) (Washington, DC: 2003).

documents discuss how each service understands transformation, service priorities, and how each service views its joint interdependencies. For additional insight on service priorities and goals, one should consult each service's annual posture statements, which are still in production.

Agencies outside the Department of Defense (DOD) add an important outsider's view, and can often serve as quick primers on transformation. The Congressional Budget Office (CBO) and the US Government Accountability Office (GAO) each produced a large number of studies on transformation, addressing a wide variety of DOD, combatant command, and service-level issues. The intended audience for most CBO and GAO publications is the US Congress. Therefore, these studies tend to be brief and succinct, but also tend to omit a lot of detail. As a result, DOD has at times disagreed with CBO and GAO assessments, citing a lack of understanding of how the department was operating, or that reports failed to address the whole picture.[11]

More thorough "outsider" reports can be found through the Defense Science Board (DSB). The DSB is a "Federal Advisory Committee established to provide independent advice to the Secretary of Defense."[12] A particularly noteworthy DSB series is the 2006 *Defense Science Board Summer Study on Transformation: A Progress Assessment,* Volumes 1 and 2. The first volume is a summary report, and therefore most useful. The second volume is a compilation of the multiple independent sub-studies that completed the overall study. Even though the DSB works for DOD, this series offered several frank and thoughtful insights into the successes and shortcomings of Rumsfeld's transformation effort.

The list of institutions, both inside and outside the US government that devoted significant effort to discussing transformation is particularly long. Even though this list is not exhaustive, the following organizations produced several thought-provoking and scholarly pieces:

- National Defense University, Washington, DC.
- Joint Forces Staff College, Norfolk, Virginia.
- The Center for Strategic and Budgetary Assessments, Washington, DC.
- The Council on Foreign Relations
- The RAND Corporation
- The US Military Services' Staff Colleges and War Colleges

While there are many books devoted to the study of defense transformation, perhaps the two most complete and thorough texts are Max Boot's *War Made New: Technology, Warfare, and the Course of History, 1500 to Today*,[13] and Frederick W. Kagan's *Finding the Target: The Transformation of American Military Policy*.[14] Boot's lengthy book discusses over 500 years of revolutions in military affairs, to include the current information-based RMA. His linking of success to a nation's bureaucratic efficiency is particularly unique and valuable when assessing the status of America's current attempt at transformation.

Kagan's history is much shorter, addressing only 50 or so years. Like Boot, Kagan acknowledges the current information-based RMA. However, Kagan is less enthusiastic than Boot about the prospects of this current RMA and even less so about its presumable support for airpower at the expense of ground forces. Kagan is especially doubtful about Network Centric Warfare, and concepts such as

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[11] One such example can be found in United States Government Accountability Office Report GAO-05-70, "Military Transformation: Clear Leadership, Accountability, and Management Tools Are Needed to Enhance DOD's Efforts to Transform Military Capabilities," (Washington, DC, 2004), pp. 32-34.

[12] Defense Science Board (hereafter, DSB), *Defense Science Board Summer Study on Transformation: A Progress Assessment*, Vol. 1, (Washington, DC: Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, 2006), inside cover.

[13] Max Boot, *War Made New: Technology, Warfare, and the Course of History, 1500 to Today* (New York: Gotham Books, 2006).

[14] Frederick W. Kagan, *Finding the Target: The Transformation of American Military Policy*, (New York: Encounter Books, 2006).

"Shock and Awe." In the end, Kagan makes a strong case against the prospects for successful transformation in an era during which the US holds significant military dominance, and offers several compelling recommendations for the Pentagon.

Finally, each US military service has its key transformationalist thinkers, and their works would round out any library on military transformation. For the Army, it is Colonel Douglas A. Macgregor. Macgregor 1997 book, *Breaking the Phalanx: A New Design for Landpower in the 21st Century*, essentially laid the groundwork for the "Modular Army" and provided much of the theoretical basis for the service's Stryker Brigade Combat Team as well as the Future Combat System.[15] Macgregor's more recent book, *Transformation Under Fire: Revolutionizing How America Fights* offers an Army-specific view of how land forces can and should prepare for a new age of joint expeditionary warfare.[16] Although not written in response to Kagan's *Finding the Target*, Macgregor's enthusiasm for the prospects offered to land forces by the current RMA is a nice counter-balance to Kagan's distaste for it.

The most noteworthy Air Force transformationalist is Colonel John Boyd. Boyd made the case for speed of command with his OODA loop in a series of slides entitled, "A Discourse on Winning and Losing." OODA stands for "observe-orient-decide-and-act." As the events of battle are played out, opposing forces, and even individual commanders, must go through the process of observing the events, orienting the events to the current situation, deciding what to do next, and then acting upon that decision. Boyd believed that victory would be enabled by the military capable of moving though this loop faster than its adversary.[17] Transformationalists believe that the technologies of the Information Age, coupled with nimble forces will enable movement through the OODA cycle at increased rates.

Perhaps the most significant proponent for transformation is Naval Admiral Bill Owens. Owens coined the phrase, "system of systems" and is the author of *Lifting the Fog of War*.[18] Owens argues that this information technology-enabled system-of -systems will accelerate a military's ability to assess, direct, and act; thereby creating a "powerful synergy" and enable combat victory.[19] Based upon this new synergy, Owens makes the theoretical case for much of Rumsfeld's transformational effort to include unified command structures, enhanced jointness, embedded information warfare capabilities, leaner combat structures, and enhanced mobility.[20]

<u>Transformation's Heritage</u>

> We need rapidly deployable, fully integrated joint forces capable of reaching distant theaters quickly and working with our air and sea forces to strike adversaries swiftly, successfully, and with devastating effect. We need improved intelligence, long-range precision strikes, sea-based platforms to help counter the access denial capabilities of adversaries.[21]

Approximately one year into the Bush Administration, Secretary of Defense Donald Rumsfeld succinctly presented his oft-cited vision for transformation during a speech to the National Defense University at Fort McNair, Washington, DC. This vision did not occur in a vacuum. Rather, it has a lineage of influences pre-dating the Secretary's time in office.

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15   Douglas A. Macgregor, *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Westport: Praeger, 1997).
16   Douglas A. Macgregor, *Transformation Under Fire: Revolutionizing How America Fights* (Westport: Praeger, 2003).
17   Cited in Kagan, *Finding the Target: The Transformation of American Military Policy*, pp. 102-112.
18   Bill Owens, *Lifting the Fog of War* (Baltimore: Johns Hopkins University Press, 2001).
19   Owens, pp. 98-100.
20   Ibid., pp. 202-206.
21   Donald Rumsfeld, "21st Century Transformation" (Lecture, National Defense University, Washington, DC, January 31, 2002), www.defenselink.mil/speeches (accessed September 28, 2007).

These influences include previous thought on what transformation meant, conservative opinions on how the Clinton Administration handled transformation, the state of the force Rumsfeld inherited, and perhaps most importantly, presidential direction. Rumsfeld's subsequent approach reflected each of the above influences as well as Rumsfeld's leadership style. It would be daunting by any objective standard. While transformation certainly included a significant modernization program, with proponents and detractors in its own right, it was much more. Understanding that transformation begins in the mind, Rumsfeld questioned organizational, doctrinal, personnel, and acquisition practices. Service-specific roles, responsibilities, and "truths" were on the table. It appeared that nothing would be sacred.

This chapter outlines the historical antecedents that led to Rumsfeld's transformation approach. Highlights include its history, beginning with the close of the 1991 Gulf War and the intellectual base that evolved since the war's end. In addition, it discusses perceptions and realities of the American military, particularly with regard to budgetary priorities and military culture under the Clinton Administration. It concludes with discussion of Rumsfeld's three transformational targets.

Transformation's Historic and Conceptual Roots

The notion of transformation formally entered the Pentagon's lexicon around 1997, with the publication of *Joint Vision 2010*, which the department updated in 2000 as *Joint Vision 2020*. However, the notion of an upcoming Revolution in Military Affairs (RMA) more accurately began after the 1991 Gulf War.[22] Then Secretary of Defense, Richard Cheney commented in the official Department of Defense report on the conflict that "this war demonstrated dramatically the new possibilities of what has been called the 'military-technological revolution in warfare.'"[23] Over the following years, this perception gained popularity among the Pentagon's intellectual sect, to include the Office of Net Assessment's director, Andrew Marshall, Vice Chairman of the Joint Chief of Staff Admiral William Owens, and even among experts outside the department.[24] The view also gained a receptive audience in the defense manufacturing and analytical industries which feared a decline in military budgets following the Gulf War and the demise of the Soviet Union.[25] Effectively arguing that the stakes were high, this dynamic and influential alliance made Trtansformation a departmental and congressional priority. Indeed, as US Army War College professor, Steven Metz notes, this group convinced key policymakers "that America's security depended on mastering the ongoing RMA."[26] It is these intellectual and political events that set the stage for *Joint Vision 2010's* production in 1997.

However, *Joint Vision 2010* was, as its title suggests, simply a "conceptual framework."[27] By design, it did not outline specific policy and doctrinal options. Policymakers needed more concrete options and recommendations through which to apply resources. For that, they looked to the first *Quadrennial Defense Review*, published also in 1997. Emphasizing the "threat of coercion and large-scale cross-border aggression against US allies and friends in key regions by hostile states with significant military power"[28] this report focused on Desert Storm-type scenarios, and was lean on new ideas. As a result, an unimpressed Congress, through the 1997 Defense Authorization Act, directed the Secretary of Defense to commission a high-level National Defense Panel to generate more creative proposals. The Panel's recommendations for "a broad transformation of its military and national security

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[22] For a more thorough historical discussion of the period from 1991 through 2006, see Steven Metz; "America's Defense Transformation: A Conceptual and Political History," *Defence Studies* 6, No. 1 (March 2006), pp. 1-25.

[23] Department of Defense, "Conduct of the Persian Gulf War, Final Report to Congress" (Washington, DC, 1992), p. xx.

[24] William J. Taylor Jr. and James Blackwell, "The Ground War in the Gulf," *Survival*, 33 (May/June 1991), pp. 230-245.

[25] Steven Metz, "America's Defense Transformation: A Conceptual and Political History," *Defence Studies* 6, No. 1 (March 2006), p. 4.

[26] Ibid.

[27] Shalikashvilli, p. iv.

[28] William S. Cohen, *Report of the Quadrennial Defense Review* (Washington, DC, 1997), p. 3.

structures, operational concepts and equipment," firmly linked future defense activities to this RMA.[29]

However, if the Clinton Administration agreed with this view, it was only on the margins. To be certain, the 1997 through 2000 *National Security Strategies* clearly discussed the RMA. However, the discussions lacked depth. Steven Metz called the strategy, "reform packaged as revolution."[30] The Project for a New American Century, a conservative Washington think-tank, was notably more critical:

> Yet for all its problems in carrying out today's missions, the Pentagon has done almost nothing to prepare for a future that promises to be very different and potentially much more dangerous. It is now commonly understood that information and other new technologies—as well as widespread technological and weapons proliferation—are creating a dynamic that may threaten America's ability to exercise its dominant military power. […] [T]he Defense department and the services have done little more than affix a "transformation" label to programs developed during the Cold War, while diverting effort and attention to a process of joint experimentation which restricts rather than encourages innovation.[31]

At its best, the Clinton strategy was, in its own words, "a carefully planned and focused modernization program."[32] To its detractors, however, it indicated a failure of strategic leadership by avoiding tough calls.[33] The truth was probably somewhere in between. To be fair, the Clinton strategy was consistent with the tone of *Joint Vision 2010/2020*. None of the 1997-2000 *National Security Strategies* challenged traditional service roles and responsibilities, and they clearly did not question or prioritize long-standing, service-specific modernization programs. As suggested by the department's research and development budget (figure 1), it appeared that future Clintonian militarystrategies would not drive technological
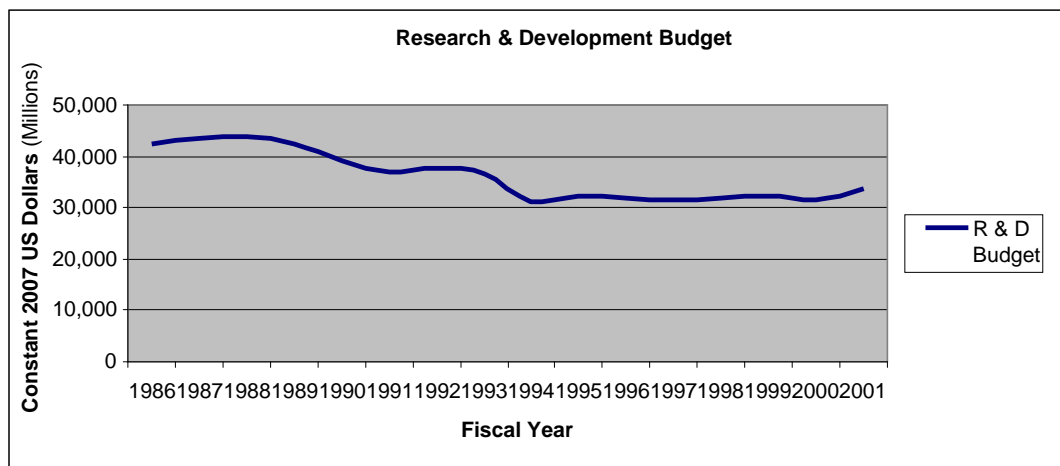
Figure 1: Research and Development Budget[34]

innovation, but respond to it. Perhaps even more confounding to the Strategies' detractors, over a decade after Goldwater-Nichols, "jointness" still meant "coordination" vice "integration." Such an approach was uninspiring and lethargic, and it proved itself unsatisfactory to the corps of

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[29] National Defense Panel, *Transforming Defense: National Security in the 21st Century,* (Washington DC, December 1997), p. 1.

[30] Metz, p. 6.

[31] Project for a New American Century, *Rebuilding America's Defenses: Strategy, Forces and Resources for a New Century* (Washington, DC, Project for a New American Century, 2000), p. 1.

[32] The White House, *A National Security Strategy For a New Century* (Washington, DC, 1999), p. 21.

[33] Andrew F. Krepinevich Jr., "Why No Transformation?" *Joint Forces Quarterly* 23 (Autumn/Winter 2000), pp. 97-101.

[34] Data from the Office of the Under Secretary of Defense (Comptroller). *National Defense Budget Estimates for FY 2007* (Washington, DC, 2006), p. 81. Figure produced by author.

transformation revolutionaries.

It was a widely held view that in the 1990s, the United States was in a historically unique, post-Cold War, "strategic pause." Widely published conservative commentator Charles Krauthammer called it America's "Unipolar Moment."[35] In other words, the United States was, as a result of the Soviet Union's demise, the world's only military superpower with no foreseeable peer, or even near-peer, state competitor in the close future. While most analysts agreed with this assertion, they differed on this pause's by-product and opportunities.[36] A common phrase in the 1990s was, "Peace Dividend." Peace Dividend proponents argued that this period was an opportunity to reduce military expenditures, focus on domestic priorities and even balance federal budgets. Alternatively, American conservatives considered this an opportunity to bolster and transform the defense establishment, as well as focus on emerging asymmetric threats, such as weapons proliferation, enemy missile capabilities, and terrorism. Certainly to the defense manufacturing community, this opportunity included a chance to develop a new generation of weapons, thereby keeping defense budgets strong through the upcoming decades.

State of the Budget

One indicator of how the Clinton Administration viewed the strategic pause is its defense spending. And to the conservative establishment's ire, the Clinton Administration pursued the "Peace Dividend" model. In spite of conservative complaints that Clinton neglected the Defense Department, the trend toward reductions in real defense spending began in 1986, during the Reagan Presidency. The sharpest decline since 1986 was in 1991, while George H.W. Bush was President. Nonetheless, it is fair to note that, in constant 2007 dollars, defense budgets remained flat or declined throughout the first six years of the Clinton Administration (see Figures 2, 3 and 4).
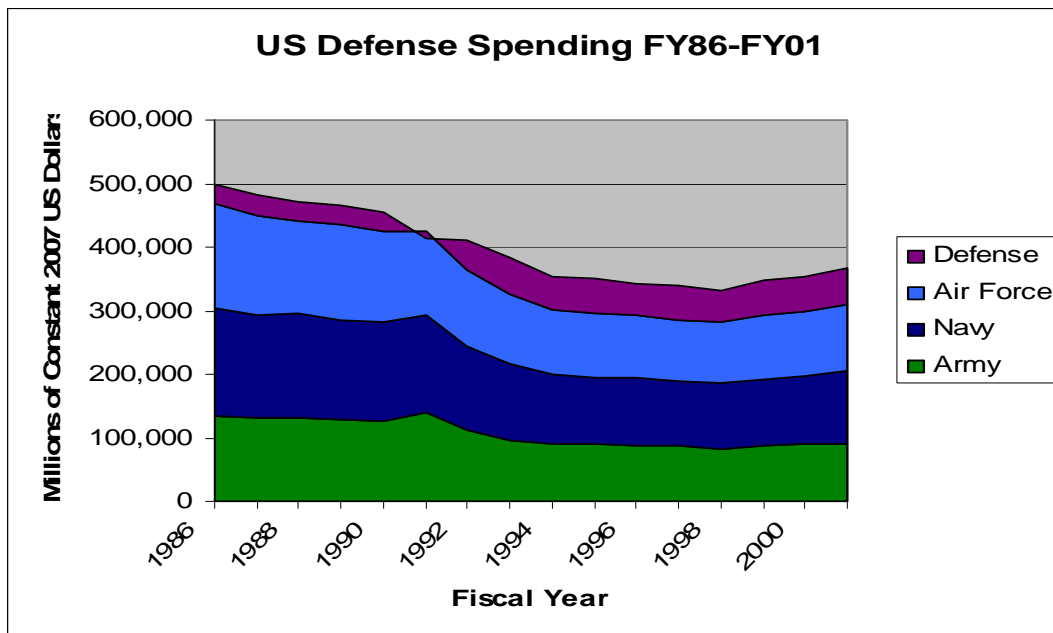
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[35] Charles Krauthammer, "The Unipolar Moment," *Foreign Affairs*, "America and the World 1990/91," http://www.foreign affairs.org/19910201faessay6067/charles-krauthammer/the-unipolar-moment.html?mode=print (accessed January 19, 2008).

[36] John Hillen and Lawrence Korb produced a project titled, *Future Visions for U.S. Defense Policy: Four Alternatives Presented as Presidential Speeches* (New York: Council on Foreign Relations, 2000). In this well thought-out and presented text, they outlined four defense policy alternatives, and discuss the challenges and strengths of each. It is an excellent overview of the alternatives facing policymakers in the late 1990s.

Figure 2: US Defense Spending, FY 86- FY 01[37]

Defense Spending as Percentage of Federal Budget

[Figure 2: Line graph showing defense spending as a percentage of the federal budget by fiscal year]
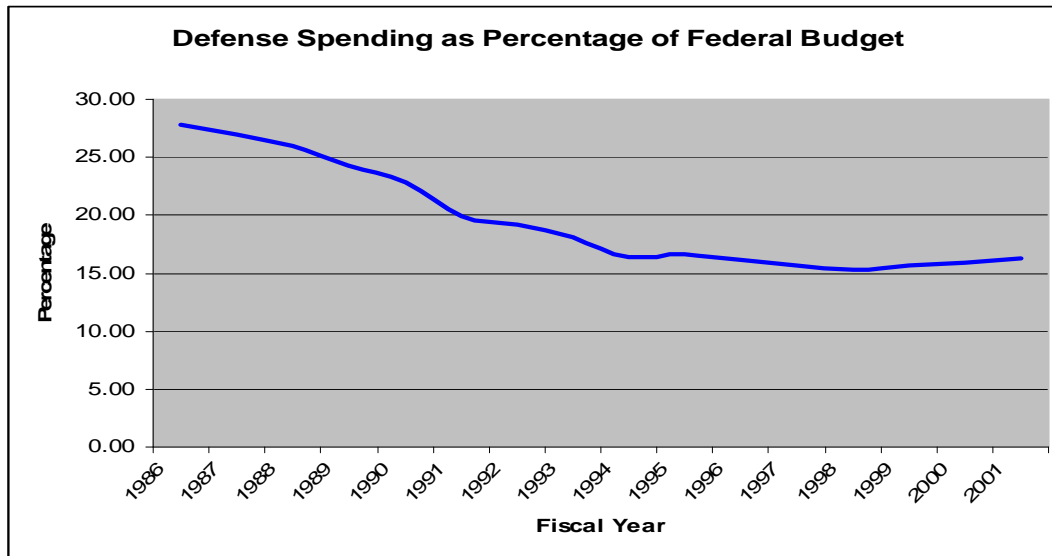
Figure 3: Defense Spending as a Percentage of the Federal Budget[38]

Percentage of Real Budgetary Growth by Service

[Figure 4: Bar chart showing percentage of real budgetary growth by service (Army, Navy, Air Force, Overall) by fiscal year]
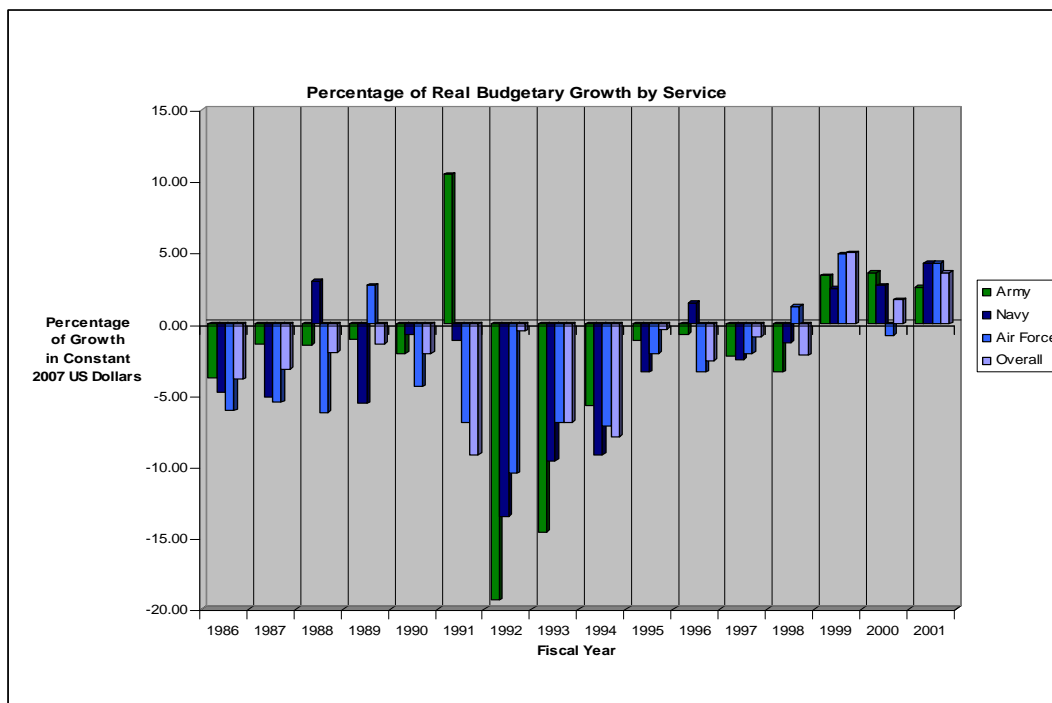
Figure 4: Percentage of Real Budgetary Growth by Service[39]

State of the Force

By 2000, modernization was not the only argument for increasing defense outlays in the new century. Indeed, modernization alone would not result in the new force envisioned by transformation proponents. The state of the force needed attention. Here, the discussion highlights issues of military

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[37]   Data from the Office of the Under Secretary of Defense (Comptroller). *National Defense Budget Estimates for FY 2007* (Washington, DC, 2006), pp. 125-127. Figure produced by author.

[38]   Ibid., pp. 105-108. Figure produced by author.

[39]   Ibid., pp. 125-127. Figure produced by author.

culture, retention, and compensation.[40] Popular and academic discussions of the time are fraught with observations on the paradox of simultaneous reductions in expenditures and infrastructure with increases in deployments and other operations. And there are no shortages of stories or "e-rumors" of soldiers' families on food stamps. While it is true that these issues were not a simple as they seemed, nor were all of them trustworthy, it is worthwhile to note some significant, legitimate trends.

In February 2000, the Center for Strategic and International Studies published a comprehensive, academically rigorous and nonpartisan study on military culture in 1998 through 1999.[41] While it is unclear to what degree policymakers referenced this specific study, it does highlight readily available trend data that would be worrisome to any incoming Defense Secretary, especially one looking to harness the opportunities of the ongoing RMA. Among such findings are the following:

- "Morale and readiness are suffering from force reductions, high operating tempo, and resource constraints."[42]
- "Present leader development and promotion systems are not up to the task of consistently identifying and advancing highly competent leaders."
- "Operations other than war, although essential to the national interest, are affecting combat readiness and causing uncertainty about the essential combat focus of our military forces."
- "Although the quality and efficiency of joint operations have improved during the 1990s, harmonization among the services needs improvement."
- "Reasonable quality-of-life expectations of service members and their families are not being met. The military as an institution has not adjusted adequately to the needs of a force with a higher number of married people."[43]

Military operations in Somalia, Rwanda, Haiti, the Balkans, among many others, as well as the ongoing military presence in the Middle East were taking their tolls. Military members grew increasingly concerned about training and readiness quality. And perhaps most distressing to CSIS, "the services [were] losing a disproportionate number of their most talented service members."[44] It was clear that the very talent needed to lead this transformational effort was leaving the military for high-paying civilian jobs that offered increased familial stability.

Presidential Influence

> Our military is without peer, but it is not without problems.[45]
>
> *George W. Bush* (September 23, 1999)

The challenges of average military member, the state of the Defense Department and its budget, and

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[40] Congressional Budget Office (hereafter, CBO), *Evaluating Military Compensation*, Publication Number 2665 (Washington, DC, 2007), 9-20. This report thoroughly discusses the "military pay gap." Considering the entire set of military compensation programs (termed "Regular Military Compensation"), not just base military pay, the CBO estimated that military compensation lagged behind private-sector compensation by 7-10 percent throughout the 1990s. The CBO estimates that the "military pay gap" did not close until around 2002.

[41] Center for Strategic and International Studies (hereafter, CSIS), International Security Program, *American Military Culture in the Twenty-First Century* (Washington, DC: CSIS Press, 2000). This was an exhaustive study involving 12,500 participants in a written climate survey, several in-person field studies, and two conferences held in 1998 and 1999. The study's working group included not only many CSIS members, but also several general and flag officers, a wide variety of academic representatives, and noteworthy members of the medical community.

[42] CSIS, p. xx.

[43] Ibid., pp. xxi-xxiv.

[44] Ibid., p. xxv.

[45] George W. Bush, "A Period of Consequences" (lecture, The Citadel, Charleston, SC, September 23, 1999), http://www.citadel.edu/pao/addresses/pres_bush.html (accessed September 27, 2007).

the conservative call for a transformed military hit a chord with Presidential Candidate George W. Bush. While the state of the military was not the preeminent issue upon which he campaigned, he advertised a vision for the military that addressed all the situations and challenges outlined thus far. Bush's September 23, 1999 Citadel speech, "A Period of Consequences," offers a plan that surely won approval of the transformationist corps. In this speech, he addressed every topic from current budgetary shortfalls, to the need for increased Research and Development budgets. He highlighted inadequate military pay and the services' ongoing "brain drain." He promised new application of the strategic pause and a transformed military:

> My goal is to take advantage of a tremendous opportunity – given few nations in history – to extend the current peace into the far realm of the future. A chance to project America's peaceful influence, not just across the world, but across the years.
>
> This opportunity is created by a revolution in the technology of war. Power is increasingly defined, not by mass or size, but by mobility and swiftness. Influence is measured in information, safety is gained in stealth, and force is projected on the long arc of precision-guided weapons. This revolution perfectly matches the strengths of our country – the skill of our people and the superiority of our technology. The best way to keep the peace is to redefine war on our terms.
>
> […] The last seven years have been wasted in inertia and idle talk. Now we must shape the future with new concepts, new strategies, new resolve. […]
>
> [I will] use this window of opportunity to skip a generation of technology. This will require spending more – and spending more wisely. […] I will expect the military's budget priorities to match our strategic vision – not the particular visions of the services, but a joint vision for change.[46]

As is well known, George W. Bush did not win in 2000 with a mandate in the traditional sense. Nonetheless, history seemed to be working in the transformationists' favor. The next challenge was to appoint a Secretary of Defense up to the task.

Enter Donald Rumsfeld

President Bush understood that the task would be immense.[47] He needed someone with organizational creativity, experience in the Pentagon as well as with Congress, and conservative credentials to boot. Donald H. Rumsfeld would be that man. He had exactly the right pedigree: previous experience as the Defense Secretary, an impressive private sector career with the pharmaceutical corporation, Searle, and experience as a member of the House of Representatives. While Rumsfeld may have had some shortcomings, being a faithful lieutenant to his President was not one of them. Every indication of his approach to transformation reflects first, the President's campaign promises; second, the clear desire to correct perceived shortcomings from the Clinton Era; and third, the circumstances that evolved since Desert Storm's close in 1991. As one examines Rumsfeld's approach to transformation, three distinct parts emerge. Rumsfeld approached transformation as a process, a new way of war, and a strategy.

A Process, a New Way of War, and a Strategy

Of the official transformation products, and as suggested by its title, *Military Transformation: A Strategic Approach*, is probably the most comprehensive strategic discussion. Through the text's glossy pages, the Department of Defense broadly outlined Rumsfeld's three-part approach to defense

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[46] Ibid.
[47] Ibid.

transformation. The Executive Summary opens with the Department's official process-focused definition:

> A process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people, and organizations….[48]

Continuing, the Executive Summary broadly describes the new way of war to be realized by this process:

> Constructed around the fundamental tenets of network-centric warfare and emphasizing high-quality shared awareness, dispersed forces, speed of command, and flexibility in planning and execution, the emerging way of war will result in US forces conducting powerful effects-based operations to achieve strategic, operational, and tactical objectives across the full range of military operations.[49]

Toward the end of the Executive Summary, *Military Transformation: A Strategic Approach* offers the third part of Rumsfeld's approach:

> Transformation is [about] yielding new sources of power.[50]

Military Transformation: A Strategic Approach provides little depth to this part, but it is important nonetheless. Rumsfeld viewed transformation as a strategy unto itself. Terry Pudas, former Director of the Office of Force Transformation, described this as "a conscious effort to choose your future competitive space."[51] In short, Rumsfeld sought to change not only the American, but also the world's approach to conflict. By accelerating the RMA's opportunities, and perhaps even molding them, transformation would provide potential adversaries with an expensive security dilemma via new technologies, organizations and doctrine. And in turn, the strategy would arguably force potential aggressors to abandon their use even before seeking them.

As noted by President Bush in his Citadel speech, there existed a broadly held perspective that the Department's and the services' cultures were hindrances to significant change. The Pentagon itself needed to be fixed. Service traditions and independence hindered the military's movement toward true jointness. Continuously focused inward, the Department of Defense failed repeatedly to leverage and employ capabilities available in other Executive Branch agencies. The Department's bureaucracy, and to a similar degree, the services' organizations, were bloated, cumbersome, constrained and unimaginative. Process outweighed product. These complaints were nothing new in defense circles.[52] What is new is that Rumsfeld's process addressed these complaints by identifying three targets in order to affect the cultural change: departmental business practices, interagency and coalition operations, and how the military fights.[53] And it would be through these changes that the culture of flexibility and innovation required for transformation's success would be realized. The target, "business practices," refers to attempts to convert the department's bulky and process-focused bureaucracy into a more responsive and innovative corporate structure. This structure includes human resource management and promotion schemes, acquisition and fiscal strategies, and operational planning and doctrine development cycles. The result would be an "altered risk-reward system that encourages innovation."[54] Concrete objectives included a new civilian personnel management process, called the National Security Personnel System (NSPS), and acquisition and budgeting programs that attempted to streamline the Planning, Programming, Budgeting and Execution

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[48] OFT, *Military Transformation: A Strategic Approach*, p. 2.
[49] Ibid, p. 3.
[50] Ibid.
[51] Terry Pudas (Senior Research Fellow, National Defense University), interview with author, February 14, 2008.
[52] Center for Strategic and Budgetary Assessments, "Transformation Strategy," http://www.csbaonline.org/2006-1/1.Strategic Studies/Transformation.shtml (accessed January 19, 2008).
[53] OFT, *Military Transformation: A Strategic Approach*, p. 3.
[54] Ibid., p. 10.

(PPBE) System.[55] This portion of the strategy sought to remedy the "State of the Force" problems identified earlier—and reverse the department's "brain drain" by rewarding innovation and risk-taking.

"Interagency and coalition operations" refers to attempts to leverage capabilities already extant in other Executive Branch organizations and nations' militaries to achieve what *Joint Vision 2020* calls "Full Spectrum Dominance." Rumsfeld sought to rebalance the nation's interagency approach away from the military source of power. As the Office of Force Transformation observed:

> Transforming the way the department integrates military power … with other elements of national power and with foreign partners will also help ensure that, when we employ military power, we do so consistent with the new strategic context. […] Political-military conflict … [cannot be resolved] by military means alone.[56]

This objective acknowledges the growing perception among American conservatives that the Clinton Administration too often sought military solutions, in a suboptimal way—and to the military's detriment. The Center for Strategic and International Studies noted this concern in its military culture study. In his memoirs, former Chairman of the Joint Chiefs of Staff, Colin Powell, offers a similar anecdote:

> My constant, unwelcome message at all the meetings on Bosnia was simply that we should not commit military forces until we had a clear political objective. The debate exploded at one session when Madeline Albright, our ambassador to the UN, asked me in frustration, "What's the point of having this superb military that you're always talking about if we can't use it?" I thought I would have an aneurysm.[57]

The fact that Albright eventually became Clinton's Secretary of State, and that Powell became Bush's Secretary of State makes this story especially illustrative as to the different visions between the Clinton Administration and the Bush Administration.

The final target is "how the military fights." For several reasons, this received the preponderance of attention, particularly from the services. First, this would the forum for a potential roles and missions debate. Second, it would examine how the services execute their "organize, train, and equip" functions, thereby introducing the greatest potential to impact their budgets. And finally, it represented the portion of transformation that the department could largely execute with minimal external assistance or coordination. It would not necessarily involve personnel hiring, retention, and compensation schemes, so union and public relations issues were less of a factor, as in "business practices" target. And it involves less inter-departmental or international coordination as in the case of "interagency and coalition" operations. In short, this target was almost entirely within the purview of the Pentagon itself.

Transforming How America Fights

Rumsfeld faced three, sometimes conflicting, challenges. First, he had to execute the Global War on Terror. Second, he needed to buttress perceived budgetary and infrastructure shortfalls in critical components of the military force he inherited. And finally, he needed to fulfill a presidential promise to transform the military and with it, indoctrinate the Pentagon and services in new warfighting and organizational concepts.

This section offers additional insight into the processes associated with Rumsfeld's approach to

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[55] Rumsfeld discussed the PPBE System challenges tangentially in his NDU speech. In addition, the failed USAF attempt to lease KC-767 tanker aircraft from Boeing can be viewed as an example of a Transformational acquisition strategy.

[56] OFT, *Military Transformation: A Strategic Approach*, p. 10.

[57] Colin L. Powell, with Joseph E. Persico, *My American Journey* (New York: Random House, 1995), p. 576.

transformation. It discusses the leadership methods Rumsfeld applied and the organization he created as executive authority in order to make transformation a reality. Overall, reflecting not only his aggressive leadership style, but also the conservative perception that America was wasting the strategic pause's opportunity, he chose the most intense methodology for action. The discussion continues with an explanation of the six "critical operational goals" and four "pillars" of transformation and how they relate to a new "capabilities-based" military.

Rumsfeld's Process

Rumsfeld did not have the same luxury of time as his Clintonian predecessors—for three reasons. First, Rumsfeld needed to deliver on a Presidential promise with concrete, demonstrated action. Second, based upon prevalent conservative thought, he needed to leverage whatever was left of the strategic pause to produce a transformed military. And finally, the events of September 11, 2001 and interventions in Afghanistan and Iraq served only to intensify his sense of urgency.

Rumsfeld perceived three alternatives through which he could lead transformation. The first was via traditional modernization and recapitalization, as discussed in Clinton-era products like *Joint Vision 2020* and the *National Security Strategies* of the late 1990s. Proponents of this steady modernization policy argued that the military would be transformed as a matter of continuous improvement.[58] With new and updated technologies come new applications. Furthermore, this steady modernization policy increases expectations to blend these new technologies with enduring paradigms and principles, and in new ways, thereby expanding the military's warfighting repertoire. In *Military Transformation: A Strategic Approach,* Rumsfeld termed this approach, "Continuous Small Steps." The second approach is "A Series of Many Exploratory Medium Jumps." Changes would be within the existing service paradigms, and highlighted intra-service organizational and doctrinal changes. Rumsfeld never dismissed these methodologies as non-transformational, but encouraged a third alternative: "Making a Few Big Jumps." These jumps include measures "that will change a military service, the Department of Defense, or even the world." The department would "explore things that are well away from core competencies."[59]

At first blush, one could view this "Few Big Jumps" approach as recognition of the President's 1999 promise to "skip a generation of weapons." In reality however, the approach was more nuanced, and one aspect of the idea that transformation is a strategy. John Garstka, the Office of Force Transformation's former deputy director, describes the approach as "creating a competitive advantage through an order-of-magnitude improvement."[60] Citing improvements gained through pre-Desert Storm technologies such as the Global Positioning System, night vision goggles, and stealth technology, Garstka explains that this approach represents attempts to apply the next generation of military technology to achieve similar advantages. Examples he cites as points for discussion include directed energy weapons, non-lethal weapons, and immediately responsive space systems. Alluding to the mathematical term for "order of magnitude" as a ten-fold change, he terms such big jumps, "Ten-X-ers."[61]

The important consideration with pursuit of these "Ten-X" (or even less dramatic) improvements is the leadership demand required for success on behalf of the Defense Secretary himself. Under "Continuous Small Steps," success can be achieved through strong management practices and standard bureaucratic processes. With the "Many Exploratory Medium Jumps" model, the leadership demand is placed primarily within each service. And with the "Few Big Jumps" approach, the

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[58] Richard L. Kugler and Hans Binnendijk, "Choosing a Strategy," in *Transforming America's Military*, ed. Hans Binnendijk (Washington, DC: National Defense University Press, 2002), pp. 57-87.
[59] OFT, *Military Transformation: A Strategic Approach*, p. 8.
[60] John Garstka (OASD/SO-LIC), interview with author, February 15, 2008.
[61] Ibid.

Secretary would have to exercise strong, and at times, "bully pulpit" leadership (see figure 5).
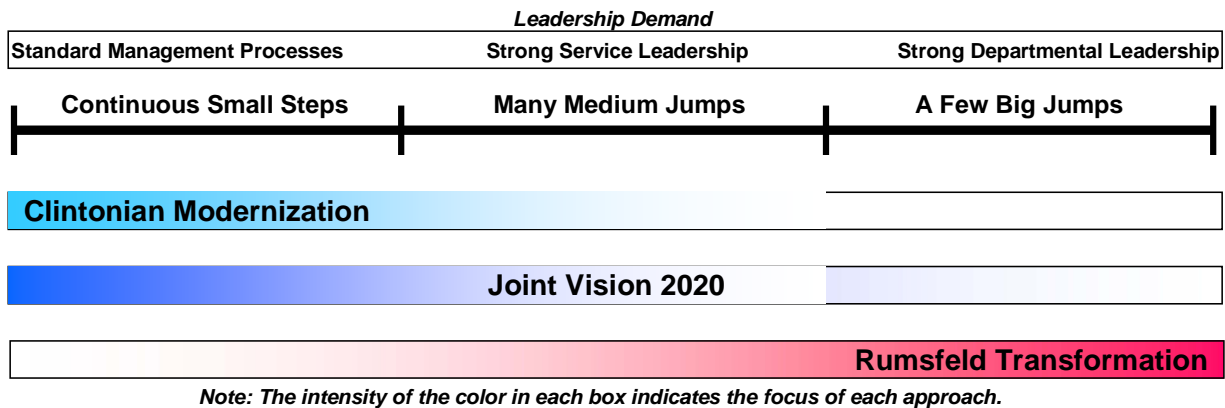

Figure 5: Comparison of Transformational Approaches

Rumsfeld understood this leadership demand, and established a new organization to bolster his aggressive stance: the Office of Force Transformation (OFT). A think-tank of sorts, OFT would move transformation from the theoretical realm to the practical realm. With its director acting as the transformation czar, it would ensure that "joint concepts are open to challenge by a wide range of innovative alternative concepts and ideas."[62] The first OFT Director was retired Admiral Arthur K. Cebrowski. Possessing extensive combat experience in Vietnam and Desert Storm, academic credentials as the former President of the Naval War College, and staff experience as the Joint Staff's Director of Command, Control, Communications and Computers, Cebrowski offered the right blend of experience for the position. Furthermore, as demonstrated with his 1998 *Proceedings* article, "Network Centric Warfare: Its Origins and Future," he was an early advocate of defense transformation.[63] Within 30 days of his retirement from the U.S. Navy in October 2001, he began his new duties as the transformation czar.[64]

Even though OFT existed, Rumsfeld's process leveraged the services' traditional organize, train, and equip roles and US Joint Force's (USJFCOM) enduring concept development role as transformation's primary mechanism. Formal procedural direction came from the *Transformation Planning Guidance (TPG)*. The *TPG* opens with a three-chapter discussion about the need for transformation's and continues with a brief description of transformation's scope and strategy, consistent with those outlined in *Military Transformation: A Strategic Approach.* For USJFCOM, the command's responsibility focused on "developing joint warfighting requirements, conducting joint concept development and experimentation and developing specific joint concepts assigned by the Chairman of the Joint Chiefs of Staff."[65] The *TPG* further identified the Secretaries of the military departments and the services' Chiefs of Staff as "responsible for developing specific concepts for supporting operations and core competencies … and build[ing] transformation roadmaps."[66]

The *TPG* later specified that these roadmaps would be due to the Secretary not later than November 1 each year, with the initial product due in November 2003.[67] And for content, the *TPG* insisted that

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[62] Rumsfeld, *TPG,* 12.
[63] Arthur K. Cebrowski and John J. Garstka, "Network-Centric Warfare: Its Origin and Future," *Proceedings* (January 1998), http://www.oft.osd.mil/initiatives/ncw/docs/NCW_Origins_and_Future.doc (accessed January 26, 2008).
[64] Department of Defense, "Arthur K. Cebrowski: Director, Force Transformation," Official Department of Defense Biography, http://www.oft.osd.mil/library/library_files/document_388_cebrowski_with_pic.doc (accessed October 14, 2007).
[65] Rumsfeld, *TPG*, p. 12.
[66] Ibid., p. 13.
[67] Ibid., p. 14.

these roadmaps be "actionable":

> The 2003 roadmap efforts [will] establish a baseline assessment across DOD's transformation activities. The next set of revised roadmaps will address capabilities and associated metrics to address the six transformational goals and the joint operating concepts. In addition, the service roadmaps will provide a plan for building the capabilities necessary to support the [joint operating concepts]. Similarly, the joint roadmap will provide a plan for building joint capabilities in support of the [joint operating concepts].[68]

In summary, Rumsfeld's process reflected an aggressive leadership model enabled by a transformation-specific organization and executed primarily through the services and US Joint Forces Command. The next challenge was to clarify what the process was working toward, but in actionable terms.

Rumsfeld versus "Joint Vision 2020"

Rumsfeld never identified *Joint Vision 2020* as his benchmark for the transformed military,[69] but a comparison of perceived new ways of war in the Clinton-era document with that described in several Rumsfeld-era documents illustrates that the differences were in terminology versus substance. One example is that *Joint Vision* applies Admiral Owens' phrase, "system of systems" while *Military Transformation* emphasizes Cebrowski's "Network Centric Warfare" concept. In the end, both envision rapidly deployable, highly dispersed forces executing precise, effects-based operations through shared awareness and speed of command.

Nonetheless, there are three important differences in nuance worth mentioning. The first is in reference to acquisition strategy as related to organization and warfighting constructs. The second is in the concept of jointness. The third difference is in how to develop a creative and innovative personnel culture. *Joint Vision's* tone suggests that a "steady infusion" in widely available technology would enable the new warfighting capabilities, concepts, and structures suggested in the document.[70] Alternatively, as shown in the *Transformation Planning Guidance (TPG)* of April 2003, Rumsfeld intended to invert this process:

> Instead of building plans, operations, and doctrine around military systems as often occurred in the past, henceforth the Department will explicitly link acquisition strategy to future joint concepts in order to provide the capabilities necessary to execute future operations.[71]

As related to jointness, *Joint Vision's* perception was less demanding than Rumsfeld's vision. Although *Joint Vision* discusses "integration" and "interdependence," and even makes room for "integration of the services' core competencies,"[72] its tone suggests that this would occur primarily at the Joint Force Commander level. *Joint Vision's* emphasis clearly is on integrated decision-making and shared awareness with "synchronized" multi-component operations.[73] Under Rumsfeld, "interdependence" would be the new standard. Reasons for this nuance are not immediately clear, but likely due to a desire to produce *Joint Vision* as a worthwhile product without pressing service sensitivities. The Air Force's doctrinal stand that air forces must be commanded by an airman is one example of this sensitivity.[74]

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[68] Ibid., p. 19.
[69] Terry Pudas (Senior Research Fellow, National Defense University), interview with author, February 14, 2008.
[70] Shelton, *Joint Vision 2020* (hereafter *JV 2020*), pp. 3, 24-25.
[71] Rumsfeld, *TPG*, p. 7.
[72] Shelton, *JV 2020*, p. 31.
[73] Ibid., pp. 6, 8, 13, 15, 20, 31, 34.
[74] Air Force Doctrine Center, *Air Force Basic Doctrine*, Air Force Doctrine Document 1, (Washington, DC, 2003), p. 21.

The final nuance worth noting relates to Rumsfeld's desire to target the Department's and services' "business practices," and specifically, the way to create the innovative personnel force required for success. *Joint Vision* highlights the importance of joint training and education. Emphasis is on creating the personnel force of the future.[75] There is no discussion of any aggressive effort to promote and retain the military's and Pentagon's most creative and adventurous members. As evidenced in the *TPG*, Rumsfeld flatly commented that the department represents it priorities, "most visibly by the promotion of individuals who lead the way in innovation."[76] The reason for this difference lies most likely with the Pentagon's desire to produce *Joint Vision* as an enduring, and motivational, product by avoiding unique "brain drain" problems and concerns for job security.

Capabilities, Pillars and Goals

A capabilities-based force represents what the Pentagon will use to define future force structures; it represents transformation's ultimate by-product. The 2001 *QDR* discusses the department's shift away from a regional, two-war strategy to a new force structure that would be defined by skill sets that the services should possess. This shift necessarily requires the services (individually and as a team) to examine critically their enduring roles and responsibilities within the context of a fast-paced, asymmetric, information-enabled world. This absolutely does not say that traditional state-on-state war or enduring principles are now completely passé. However, the services do need to examine their skill sets with an eye toward their collective mission output across the spectrum of military operations. Force structure will then become a question not of "how many units, or tanks, ships, and planes," but of "what type of effect, and how fast." RAND Analyst, Paul K. Davis, in his essay, "Integrating Transformation Programs" offers a similar definition:

> The first principle … is to organize … around mission capabilities. Although one can refer to aircraft, ships, and tanks as "capabilities," the capabilities of most interest … are the capabilities to accomplish key missions. Having platforms, weapons, and infrastructure is not enough. Of most importance is whether the missions could be confidently accomplished in a wide range of operational circumstances.[77]

The capabilities-based force concept is further enabled by key supporting concepts. Most notable are Network Centric Warfare (NCW), and Effects Based Operations (EBO).

EBO has its supporters and detractors, and this project's purpose is not to argue for or against its merits.[78] It is, however, a key element to understanding the capabilities based force. US Joint Forces Command, in its glossary, notes that EBO "focuses upon the linkage of actions to effects to objectives."[79] Douglas Macgregor describes EBO a little more practically by noting that "effects-based thinking involves a logical process of identifying the [outcome] desired, and then building a cause-effect chain leading to the desired outcome."[80]

EBO attempts to go beyond traditional force-on-force attrition warfare by accurately addressing the end-state desired. EBO understands that it is more important to change the enemy's conduct than it is to destroy his forces. For example, if the Joint Forces Commander (JFC) wants to control an area, then the effect may be achieved by neutralizing the advancing enemy's fuel supplies or eliminating routes through which he could enter the area with friendly long-range fires, airpower, or cruise missiles. The JFC could even use psychological or information operations to prevent the enemy force

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[75] Shelton, *JV 2020*, pp. 34-36.
[76] Rumsfeld, *TPG*, p. 8.
[77] Paul K. Davis, "Integrating Transformation Programs," in *Transforming America's Military*, p. 210.
[78] Milan N. Vego, "Effects Based Operations: A Critique," *Joint Forces Quarterly* 41 (2d Quarter 2006), pp. 51-57.
[79] US Joint Forces Command Website, http://www.jfcom.mil/about/glossary.htm#E (accessed on October 16, 2007).
[80] Macgregor, *Transformation Under Fire: Revolutionizing How America Fights*, p. 71.

from considering the area as important. In all situations, EBO also requires the JFC to balance the military result with an understanding of secondary effects such as the local population's perception of, and international support for, the operation.

Fred Kagan notes EBO's popularity with airpower enthusiasts, and the Army's reluctance to embrace it fully.[81] But EBO does not, by itself, promote one service over another, nor does it make a singular case for smaller, lighter, or leaner forces. What EBO does promote is an understanding that effects are in the mind of the adversary, and that the long-term effects are as important as the short-term outcomes. Therefore, success demands an understanding of how the enemy sees and understands the events before him—and as such, requires a robust intelligence capability.

Military Transformation: A Strategic Approach argues that successful Effects Based Operations are impossible without network centric organizations. As noted in the same text,

> NCW is not just dependent on technology per se; it is also a function of behavior. [...] Power tends to come from information, access, and speed. NCW will capitalize on capabilities for greater collaboration and coordination in real time, the results of which are greater speed of command, greater self-synchronization, and greater precision of desired effects.[82]

In all, NCW emphasizes flatter command structures and lower level decision making, based upon a continuous awareness of commander intent and possible changes thereof. Terry Pudas links NCW to the idea that high speed, self-synchronizing information would "replace massed forces" in the modern battlespace.[83] In other words, light, nimble forces enabled with information would be able to react faster than their adversaries to battlespace dynamics, thereby focusing effects upon the enemy in order to shape the outcome in a positive way, even though the enemy may have numerically superior forces. NCW is the technological embodiment of John Boyd's "Observe, Orient, Decide, Act (OODA)" loop concept. To achieve a robust network centric capability, *Military Transformation: A Strategic Approach* further identifies NCW's "governing principles":

- "Fight first for information superiority."
- Emphasize "high quality shared awareness" through a "collaborative network of networks" through which "information users also become information suppliers."
- Develop "dynamic self-synchronization" by increasing tactical forces' abilities to operate autonomously and to re-task themselves based upon shared awareness and the commander's intent.
- Develop "deep sensor reach" with "deployable, distributed, and networked sensors" and persistent intelligence, surveillance, and reconnaissance.
- Accelerate the "speed of command" with compressed "sensor-to-decision-maker-to-shooter timelines."[84]

While NCW is as much a behavioral as it is a technical concept, it does possess a distinct technological bend. Therefore, by its very nature, it would necessarily demand improvements in satellites, radio bandwidth, unmanned vehicles, and nanotechnology. John Garstka notes that increasing space-based forces' responsiveness is particularly important to NCW.[85] Citing the "Operationally Responsive Space" concept, Garstka points out that space's responsiveness would

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[81] Kagan, p. 185.
[82] OFT, *Military Transformation: A Strategic Approach*, p. 31.
[83] Pudas, interview with author, February 14, 2008.
[84] OFT, *Military Transformation: A Strategic Approach*, p. 31-32.
[85] Garstka, interview with author, February 15, 2008.

need to increase from days to hours, or even minutes.[86] Furthermore, the NCW concept would have to address long-standing issues associated with joint, coalition, and interagency interoperability.[87]

The four "pillars" of transformation serve as clear evidence that Rumsfeld understood that Transformation was a continuous process, and therefore needed core truths that guide its growth and adaptation—and serve as the force's foundation. These truths would function as the long-term, enabling perspective for transformation:

- Pillar One: Strengthening joint operations,
- Pillar Two: Exploiting U.S. intelligence advantages,
- Pillar Three: Concept development and experimentation,
- Pillar Four: Developing transformational capabilities.[88]

It is clear that Rumsfeld meant to intensify jointness between the services, and even in the interagency and coalition arenas. And in this sense, "modularity" is perhaps a better term. Modularity is not addressed in the Pentagon's mainstream transformation texts, but it did gain traction with the US Army.[89] Modularity is more than simple joint operations, and it goes beyond interoperability. Modularity is the requirement for capability-providers to be jointly-minded enough, and to be interoperable enough, to be successful, especially on minimal or even zero, notice. A "capability provider" could be a single-service, joint, or interagency team that is presented to the Joint Forces Commander (JFC) as a self-contained means. And there may be more than one capability provider per possible capability desired (even though the capability may not be resident in every service). In essence, then, when needed, the JFC would be presented (ideally from US Joint Forces Command) a menu of options through which he can produce the desired operational outcome resulting from his mix of capabilities. The key point is that the menu choices are interoperable, inter-doctrinal, and flexible enough to be successful as an inter-capability team, regardless of which other specific organization is involved. Douglas Macgregor uses the phrase, "plug and play."[90] While close to modularity in concept, it is important to note that capability providers do not have to be the same size or operate on similar timelines. They simply have to be interchangeable in reference to output.

This pillar also placed demands on the Department's acquisition and organization strategies. New capabilities, and their associated platforms, doctrines, and organizations would be "born joint," and devised in support of four Joint Operating Concepts (JOC): homeland security, stability operations, strategic deterrence, and major combat operations.[91] These demands had implications for interoperability in system designs at their outset (vice through post-acquisition retrofit actions), and further reinforces the modularity discussion, above.

As highlighted in the EBO discussion above, intelligence will be a priority. As discussed in the *TPG*, it serves to provide strategic and operational warning, and is the critical bedrock upon which EBO resides. The *TPG* further specifies that the US intelligence picture will be persistent and consistent.[92] In other words, it needs to provide a continuous data flow, and to produce similar results across the network of users. And with advent of network-centric warfare and speed of command, it will also possess its own modular attributes:

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[86]   Ibid.
[87]   Clay Wilson, "Network Centric Warfare: Background and Oversight Issues for Congress," Congressional Research Service, (Washington, DC, 2004), CRS-2 – CRS-3.
[88]   Rumsfeld, *TPG*, pp. 15-21.
[89]   Douglas A. Macgregor, "Transforming Jointly," in Binnendijk, *Transforming America's Military*, p. 226.
[90]   Ibid.
[91]   Rumsfeld, *TPG*, p. 15.
[92]   Ibid., p. 17.

> [US intelligence capabilities will] provide horizontal integration, ensuring all systems plug into the global information grid, shared awareness systems, and transformed Command, Control and Communication systems.[93]

The final two pillars represent the final enduring truths of Rumsfeld's transformation vision. By leveraging the Pentagon's cultural change, Rumsfeld hoped to release a continuous process through which the United States will remain ahead of potential adversaries. Concept development and experimentation demands a "competition of ideas."[94] Furthermore, experimentation allows the Department to manage risks associated with the strategic pause's uncertainty and lack of clearly defined threats. The *TPG* goes so far as to direct Combatant Commands and the services to develop enduring, formal methods to ensure that new warfighting ways are developed and tested.[95] Similarly, the fourth pillar stipulates that these same organizations maintain a formal process through which new capabilities are developed and presented to the Defense Department.

Further illustrating Rumsfeld's urgency with transformation, the strategy additionally outlined "goals." As if to prime the transformational pump, these goals represent the initial set of capabilities that would be produced by the pillars, thereby enhancing the new capabilities-based force's repertoire. Furthermore, goals would strengthen the pillars themselves. At the strategic level, *Military Transformation: A Strategic Approach* outlines six critical capabilities:

- Goal 1: Protecting critical bases and defeating chemical, biological, radiological, and nuclear weapons.
- Goal 2: Projecting and sustaining forces in anti-access environments.
- Goal 3: Denying enemy sanctuary.
- Goal 4: Leveraging information technology.
- Goal 5: Assuring information systems and conducting information operations.
- Goal 6: Enhancing space capabilities.[96]

All six goals contribute to the umbrella concept of "Deter Forward." The first three are "mission oriented goals"; the remaining three are "enabling goals."[97] Understanding "Deter Forward" allows one to understand each of these six goals more clearly:

> The capability of U.S. forces to take action from a forward area, to be reinforced rapidly from other areas, and to defeat adversaries swiftly and decisively will contribute significantly to our ability to manage the future strategic environment.[98]

In other words, the Deter Forward concept suggests a swift response to developing scenarios in such a way that the enemy would back off, give up, or become immediately incapacitated, thereby reducing or eliminating the demand of extended deployment and combat operations. As an additional benefit, if the enemy did not respond immediately to these effects, the environment would be favorable to follow-on joint, interagency, or coalition activities.

With this definition, one sees that mission-oriented and enabling goals play a significant role in this concept. Projecting critical bases is the supply side of the equation, whereas projecting and sustaining forces is the equation's consumption side. The product of this equation then is the third goal, the so-called, "enemy without sanctuary." The enabling goals contribute in a supporting fashion by

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[93]   Ibid.
[94]   Ibid.
[95]   Ibid., p. 18.
[96]   OFT, *Military Transformation: A Strategic Approach*, pp. 17-19.
[97]   Ibid., p.17.
[98]   Ibid., p. 30.

providing information, intelligence, and coherent direction to warfighting organizations via space or cyberspace, shaping the battlespace with these operations by denying the enemy use of these same media. In all, no location in the world would be immune from US abilities to see and analyze the environment, and to insert coherent, unified, and decisive effects into the scenario.

Rumsfeld's transformation program was not limited by these six goals. The prevalent transformation literature, most notably the *TPG,* outlined additional goals further supporting each of the four pillars.[99] Table 1 outlines the most significant of these new capabilities.

Pillar 1: Strengthening Joint Operations	Pillar 2: Exploiting U.S. Intelligence Advantages
Development of Near Term Joint Operations	Early Warning of Emerging Crises
Development of Mid-Term Joint Concepts	Enhanced Target Identification Processes
Development of a New Far-Term Joint Vision	Enhanced Battle Damage Assessment
Development of Standing Joint Force Headquarters	Persistent & Continuous Access to Intelligence Data
Common Relevant Operational Picture	Horizontal Integration of Intelligence Systems
Enhanced ISR Capabilities	Integration of Intelligence with Command & Control
Enhanced Sensor-to-Shooter Capabilities	
Global Information Reachback	
Adaptive Mission Planning, Rehearsal & Training	
Pillar 3: Concept Development & Experimentation	**Pillar 4: Developing Transformational Capabilities**
Enhanced Experimentation Programs:	Services to Develop Transformational Roadmaps
-- Aggressive Asymmetric Threats	Combatant Commander Derived Warfighting Concepts
-- Use of Virtual Capabilities and Threats	Joint Rapid Acquisition
-- Improved "Red Team" Infrastructures	Improved Test & Evaluation
-- Procedures & Repositories for Lessons Learned	Integration of Transformation into Joint Training
Improved War Gaming	Improved Joint Professional Developmental Education
-- Application of Human-in-the-Loop Concepts	
-- Application of Commercial-off-the-Shelf Technology	
Improved Modeling & Simulation	
Assessment of Joint National Training Capabilities	

Table 1: *TPG* Goals In Support of Transformation's Pillars[100]

Winners and Losers

A cursory examination of both the strategic and more detailed goals above clearly suggests a technological bias in Rumsfeld's transformation vision. Furthermore, the program would be expensive. However, Rumsfeld would likely bristle at the suggestion that transformation was a high-tech acquisition program by itself. And to be fair, his vision insists that doctrinal and organizational developments form the bedrock upon which the program rests. He would probably also take issue with the idea of "winners" and "losers" in this process. For when it comes to national defense, the only winners that matter would be the United States, its allies, and its interests. Terry Pudas further observes that in times of uncertainty, the goal is to create "breadth in capabilities first, then generate depth through multiple capability providers." [101] That said, there will logically be organizations, structures, and systems that garner greater departmental and fiscal support under this program than would others—at least in the short term. Table 2 outlines the likely "winners" and "losers," based upon Rumsfeld's process and transformation's desired outputs.

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[99] Rumsfeld, *TPG*, p. 15-21.
[100] Ibid.
[101] Pudas, interview with author, February 14, 2008.

Transformational "Winners"	Transformational "Losers"
Space Systems & Operations	Heavily Armored & Tracked Vehicles
Unmanned Aerial Vehicles	Large Naval Battle Groups & Organizations
Strategic & Tactical Airlift	Single Role Fighter Aircraft & Bombers
Aerial Refueling Platforms	Single Role Battlespace Organizations
Information Warfare & Operations	
Joint Command, Control & Communications	
Doctrine Development/Think Tanks	
Special Operations Forces	
Research & Development	
Missile Defense	
US Joint Forces Command	
US Strategic Command	
US Special Operations Command	
US Transportation Command	
Defense Advanced Research Projects Agency	

Table 2: Transformation's Winners and Losers

In order to defer the service-specific discussions until later sections, this table purposefully omits reference to any specific service. Nonetheless, it would be shortsighted to say that some services would not perceive themselves as "losers" more than others under Rumsfeld's vision. In its broadest terms, however, Rumsfeld's transformation vision favored systems and organizations that accentuated flat command structures, joint applications and operations, quick action, and emerging technologies and warfighting concepts. Less favored were forces with highly vertical command structures, slow response time, single roles, and large logistical footprints.

Transformation's Institutionalization

As if understanding transformation were not difficult enough at the departmental level, individual service and US Joint Forces Command (USJFCOM) interpretations served only to muddle the process further. Failing even to define transformation in the same way, each service and USJFCOM viewed its transformational responsibilities through different prisms and executed transformational efforts differently. The impact of these variances depends upon how one views DOD's organizational seriousness toward the process. At best, the services and USJFCOM sincerely attempted to address the Secretary's call and vaguely-defined tasks and outlined future opportunities to engage in a serious joint and interagency debate about transformation's direction. At worst, these organizations executed transformation as yet another staff project and simply repackaged long-standing acquisition programs as "transformational." As is usually the case, the truth lies somewhere between these extremes. At this point, however, it would be fair to argue that these variations weakened the public transformational dialogue to the point that elements both inside and outside the Department of Defense focused on what they could (or thought they could) understand. Specifically, the subsequent transformation discussion deteriorated into a debate about system acquisitions, relative budgetary balance among the services, and perceived winners and losers. In spite of some genuinely bright efforts toward improvements in doctrine, education, training, and employment, these achievements bypassed the public's attention—due to DOD's collective failure to define and execute transformation succinctly and in an integrated fashion.

This section examines how each service, USJFCOM, and other key players perceived and acted upon

the transformation challenge over three periods in Rumsfeld's tenure as the Secretary of Defense. The first is the period from October 2001 through April 2003, beginning with the 2001 *Quadrennial Defense Review (QDR)* and ending with the release of the *Transformation Planning Guidance (TPG)*. The second begins with the *TPG*'s release, and ends with the release of the 2005 *QDR*. The final period addresses the period from 2005 through 2007, during which transformation became an unguided event, and lost priority against recapitalization due to extended operations in Iraq and Afghanistan. Mechanisms for discussion include each service's "Transformation Roadmaps" and annual posture statements, as well as significant joint and service doctrinal, educational, and training initiatives. The final section will analyze the weaknesses and strengths of the American approach to transformation and provide a prognosis of its continued viability in the post-Rumsfeld era.

2001 through 2003: Transformation's Initial Steps

Even though transformation's lineage predates his time as Secretary of Defense, and was a topic during the 2000 presidential campaign, Rumsfeld officially unveiled his vision with the highly anticipated release of the 2001 *Quadrennial Defense Review (QDR)*.[102] He reinforced this vision with establishment of the Office of Force Transformation (OFT) about a month later. Nonetheless, throughout 2002 and into early 2003, the services pursued transformation with only broad formal guidance. It would not be until April 2003, when OFT officially released its *Transformation Planning Guidance*, that the services gained concrete, actionable direction.

By summer 2002, OFT produced a draft *TPG,* but formal release was delayed by inter-service and Secretarial disagreements about the document's actual role. As noted by an action officer on the Air Force staff, Rumsfeld initially wanted the tasks within this guidance to be a highly directive model for prioritization of budgets, as well as inter- and intra-service actions. Furthermore, Rumsfeld sought to retain final approval authority for what had traditionally been service-specific organize, train, and equip functions. Consequently, each service strongly disagreed with this approach and delayed the *TPG*'s release through the coordination process.[103] They collectively argued that formal forums through which the Secretary was afforded the opportunity to comment upon and shape service actions already existed. These forums included the Strategic Planning Guidance, Future Years Defense Plan, and the Planning, Programming, Budgeting, and Execution (PPBE) System, among others. In short, they argued that the *TPG* provided little additional value to the transformation dialogue.[104] It was not until spring 2003 that the Secretary, the services, and OFT resolved these differences and settled on the *TPG*'s reduced role as a forum for inter-service, USJFCOM, and OFT coordination and reporting on transformation's progress.

In spite of the lack of formal guidance, the services' and USJFCOM's efforts toward transformation hardly languished. Furthermore, each service can easily point to transformational thought and efforts that pre-dated Rumsfeld's tenure as the Bush administration's Secretary of Defense. It would be these pre-Rumsfeld thoughts, however, that colored each service's view of transformation, and initiated the seeds of inconsistency between their respective visions. The fact remains, nonetheless, that the services and USJFCOM understood the Secretary's earnestness, and, in the absence of formal guidance, initiated their own paths toward transformation by 2002.

While it did not invent the "transformation" moniker, the US Army clearly made transformation a

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[102] DOD released the 2001 *QDR* on September 30, 2001, some three weeks after the 9/11 attacks. While these attacks added to the sense of anticipation for this new document, public interest was already high due to expected changes in the "American Way of War" and a rumored shift in focus away from Europe to the Pacific Theater and Asia.

[103] Moreton Rolleston (AF/A8X), telephone interview with author, November 27, 2007, and personal interview with author, February 15, 2008.

[104] Ibid.

priority starting in October 1999, not long after Operation Allied Force, the bombing campaign against Serbia over Kosovo's independence effort, came to a close. Regardless of whether one considers the campaign a validation of airpower, the fact that Serbian President Milosevic capitulated in about the same time that it would have taken heavy ground forces to arrive on scene struck a chord with Army Chief of Staff General Eric Shinseki.[105] Furthermore, the General was concerned with the fact that these same forces were too heavy for the unimproved roads and bridges found in the region.[106] Shinseki's response to the demand for a lighter, more nimble force identified three priorities: a high-technology, "objective force" to be fielded within 10 years; an "interim force" based upon current technology, and focused upon the service's "requirement to bridge the operational gap between [its] heavy and light forces"; and modernization and recapitalization of the "legacy force," the existing platforms and organizations currently within the service.[107]

The most pressing short term activity was fielding the interim force, which would shortly be called the interim brigade combat team,[108] and built around a series of wheeled, moderately armored vehicles produced by General Motors and General Dynamics.[109] Longer term acquisitions included design and fielding of the "Future Combat System," the Comanche helicopter, and multiple Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C^4ISR) upgrades, all in support of the objective force.[110] The legacy force would be buttressed with acquisition of the Crusader self-propelled howitzer, and upgrades to the Army's fleets of helicopters, the M1 Abrams Tanks, and the M2 Bradley Fighting Vehicles.[111] And finally, understanding that "transformation applies to what we do, as well as how we do it," Shinseki also introduced a series of manpower, education, training, and readiness initiatives.[112]

Although highly contested in defense circles,[113] the Air Force's self-proclaimed preeminence in Operation Allied Force resulted in a sense of urgency notably less intense than the Army's. While appreciating that an RMA was underway, and embracing *Joint Vision 2020's* concepts, the traditionally technology-focused service did not truly address transformation as a coherent, organizational priority until 2002.[114] That said, elements of transformational thought were clearly evident before that time. For example, future USAF Chief of Staff General John Jumper, as the USAF's Air Combat Command Commander, unveiled his vision for the Global Strike Task Force (GSTF) in the spring 2001 edition of *Aerospace Power Journal*. What would eventually be one of six capability-specific task forces, GSTF was a pre-packaged, quick response, strike organization built around the Air Expeditionary Force model, a series of sensor and command nodes, and the F/A-22. GSTF would be, in the General's words, the USAF's "contribution to the nation's kick-down-the door force."[115] Similar to the Army, the Air Force consistently, throughout the 1990s and beyond,

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[105] Edward F. Bruner, "Army Transformation and Modernization: Overview and Issues for Congress," *Congressional Research Service* (Washington, DC, 2003), CRS-2.

[106] Ibid.

[107] Thomas E. White and Eric Shinseki, "A Statement on the Posture of the United States Army 2002," presented to the committees and subcommittees of the United States Senate and the House of Representatives of the 107th Congress (Washington: Office of the Chief of Staff, US Army), p. 9.

[108] Later known as the Stryker Brigade Combat Team (SBCT).

[109] Bruner, CRS-3.

[110] White and Shinseki, pp. 9-10.

[111] Ibid, pp. 11-12.

[112] Ibid, pp. 4-8

[113] See Benjamin S. Lambeth, *NATO's Air War for Kosovo: A Strategic and Operational Assessment* (Santa Monica: RAND, 2001) and Bruce R. Nardulli, Walter L. Perry, Bruce Pirnie, John Gordon IV, and John G. McGinn, *Disjointed War: Military Operations in Kosovo, 1999,* (Santa Monica: RAND, 2002).

[114] United States Air Force, "Posture Statement 2000," (Washington, DC, 2000); United States Air Force, "United States Air Force Posture Statement 2001," (Washington, DC, 2001); United States Air Force, "Air Force Posture Statement 2002," (Washington, DC, 2002).

[115] John Jumper, "Global Strike Task Force: A Transforming Concept, Forged by Experience," *Aerospace Power Journal 15*, No.

addressed several training and education, retention, infrastructure, personnel initiatives as part of its strategic message. While not outlining short, moderate, and long term goals, the Air Force's acquisition priorities included the F/A-22, the space-based laser, miniature satellites, multiple unmanned aerial vehicle systems, and several C^4ISR upgrades. In addition to these acquisition priorities, the USAF demonstrated transformational thinking by refining its Air Expeditionary Force concept from the 1990s, by designating the Air Operations Center as a command and control weapon system in its own right, and by initiating greater active duty, Air National Guard, and USAF operational integration.[116]

By the time the USAF released its posture statement in 2002, however, transformation was a clear priority. The document devoted an entire section to transformation, and presented the GSTF and the other initiatives discussed above in a transformational light. Unlike the Army, and consistent with its confident perspective, the USAF's 2002 statement's core message remained focused upon recapitalization and strengthening the service's core competencies, as opposed to organizational or doctrinal adjustments.[117]

Although the Navy participated in Operation Allied Force, it was not the clarifying moment it was to the Army or the Air Force. Furthermore, the Navy, more than the Army and the Air Force, can argue that they consistently sought to harness the opportunities of the post-Desert Storm RMA, even though they did not use "capital 'T' transformation terminology" until much later.[118] In late 1992, with its publication of *From the Sea,* the Navy formally shifted its efforts away from Cold War "blue water" engagements with Soviet Union to a new series of littoral scenarios.[119] To reflect this new focus, the service initiated the DD(X) Destroyer program,[120] and began to modify its training and equipment concepts to reflect greater joint operations, albeit primarily with the US Marine Corps. For the Navy's role in these operations, it placed greater emphasis on amphibious warfare, mine warfare, and defenses against diesel-electric submarines and small surface craft[121]—a perspective that they likely thought was validated by the attack on the USS *Cole* in 2000. Additional priorities included unmanned aerial vehicles (UAV) and unmanned underwater vehicles (UUV), as well as expanded use of stealth technologies, starting with the Joint Strike Fighter.[122]

Beyond its focus upon littoral operations, the Navy was really the first service to embrace Network Centric Warfare (NCW). Toward this end, it outlined the FORCEnet concept as part of its 2002 program guide, *Vision... Presence... Power*:

> The FORCEnet combat capability will exploit state-of-the-art information and networking technology to integrate widely dispersed human decision makers, situational and targeting sensors, and forces and weapons into a highly adaptive, comprehensive networked system to achieve unprecedented mission effectiveness

1 (Spring 2001), p. 35.

[116] United States Air Force, "Posture Statement 2000," (Washington, DC, 2000), pp. 29-31, 32-34; and United States Air Force, "United States Air Force Posture Statement 2001," (Washington, DC, 2001), pp. 5-7, 20.

[117] United States Air Force, "Air Force Posture Statement 2002," (Washington, DC, 2002), pp. 4-74.

[118] The phrase, "capital 'T' transformation" was used by Thomas L. McNaugher in "The Real Meaning of Military Transformation: Rethinking the Revolution," *Foreign Affairs* 86 (January/February 2007), pp. 140-147.

[119] Sean O'Keefe, Frank B. Kelso II, C.E. Mundy, Jr, *From The Sea* (Washington, DC, 1992), http://www.au.af.mil/au/awc/awcgate/navy/fromsea/fromsea.txt, (accessed November 30, 2007).

[120] J. Michael Gilmore, Assistant Director of National Security, (testimony, Subcommittee on Projection Forces, Committee on Armed Services, US House of Representatives, Washington, DC, July 19, 2005), reported in a Congressional Budget Office document titled, "The Navy's DD(X) Destroyer Program" (Washington, DC, 2005), p. 3: "The DD(X) is being designed as a multimission surface combatant.... The ship's capabilities are centered on providing fire support for forces on shore using two 155 millimeter advanced gun systems and 80 missile tubes that could carry Tomahawk cruise missiles or other weapons. According to the Navy, the DD(X) will be more capable than existing cruisers and destroyers against threats found in littoral regions, such as diesel-electric submarines, mines, swarming small boats, and cruise missiles."

[121] Ronald O'Rourke, "Naval Transformation: Background and Issues for Congress," Congressional Research Service, (Washington, DC, 2003), CRS-3.

[122] Ibid., CRS-4 – CRS-5.

and battle force readiness. FORCEnet is the integrated system comprised of force components, the warfighters in the force embedded within an information network. The comprehensive FORCEnet System integrates and operationally couples warfighters, sensors, weapons, command, control, intelligence, surveillance, reconnaissance, and information infrastructure assets into combat capabilities that enable NC[W] and ensure information dominance across the Navy's entire mission spectrum. FORCEnet will enable battlespace dominance through comprehensive knowledge, focused execution, and coordinated sustainment shared cross fully netted maritime, joint, and combined forces.[123]

The Navy also mentioned FORCENet in *Naval Power 21* as the integrating backbone of its operating concepts, "Sea Strike," "Sea Shield," and "Sea Basing."[124] These three concepts emphasized the unique capabilities of naval forces especially with regard to homeland defense and anti-access missions. They accompanied "Sea Warrior" as its training and education program; "Sea Trial" as its experimentation program; and "Sea Enterprise" as its business improvement program.[125]

Finally, USJFCOM pursued its role as transformation's strategic experimentation arm, most notably with the exercise, "Millennium Challenge 2002." In the command's own words,

Millennium Challenge 2002 is this nation's premier joint warfighting experiment, bringing together live field forces and computer simulation…. [exploring] how effects based operations (EBO) can provide an integrating, joint context for conducting rapid, decisive operations (RDO). Featuring live field exercises and computer simulation, [Millennium Challenge 2002] will incorporate elements of all military services, most functional/regional commands and many DOD organizations and federal agencies, using the largest computer simulation federation ever constructed for an experiment of its kind.[126]

Clearly, each service and USJFCOM understood transformation's importance, the Secretary's likely emphasis upon the process, and demonstrated concrete action, although often based upon concepts generated in the 1990s. While the period from the *QDR* to the *TPG* cannot be construed as an idle period, it was nonetheless in this interim period that the seeds of dissimilarity would be sown. All four organizations acknowledged the RMA's existence. However, at the organizational level, there was variance in how they understood the "strategic context." And in this sense, one must take a narrower view of "strategic context." Certainly, they all understood that the Cold War was over. For the Army, however, the strategic context included questions about the service's continued relevance. The Air Force perceived the new era as one in which its preeminence was nearly self-evident. Judging from the US Navy's doctrine and publications, one could see the service's self-image as a founding organization of transformation, NCW, and jointness. And as a result of this image, it was the other organizations' responsibility to catch up. USJFCOM saw transformation as an opportunity to explore simulations and experimentation within its role as one of the joint community's brain trusts.

The Process in Execution: 2003 through 2004

As several Pentagon staff officers commented, Secretary Rumsfeld's *Transformation Planning Guidance (TPG)* forced the services to describe their respective transformation visions in a concrete

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[123] United States Navy, "2002 Program Guide, *Vision... Presence... Power*," (Washington, DC, 2002) http://www.navy.mil/navydata/policy/vision/vis02/vpp02-ch3v.html (accessed November 30, 2007).

[124] United States Navy, *Naval Power 21,* (Washington, DC, 2002), p. 5.

[125] Ibid.

[126] United States Joint Forces Command, http://www.jfcom.mil/about/experiments/mc02/faq.htm (accessed November 28, 2007).

manner, and to understand their roles as part of a larger joint team.[127] And if the product served no other role, it proved itself valuable to the transformation dialogue. To that end, the *TPG* placed transformation's primary thrust in the hands of OFT, USJFCOM, and the services. Key to the process was production of annual transformation "roadmaps" by each service and USJFCOM, and production of a "Strategic Transformation Appraisal" by OFT.

Among the roadmap-specific tasks presented to the services, the most significant are the following:

- "Use the definition of transformation presented [in the *TPG*]."
- Specify "when and how capabilities will be fielded."
- "Identify critical capabilities from other services and agencies required for success."
- Identify changes to organizational structure, operating concepts, doctrine, and skill sets of personnel."
- Devise "metrics to address the six transformational goals and transformational operating concepts."[128]

For OFT, its responsibility to "monitor and evaluate implementation of the Department's transformation strategy, advise the Secretary, and manage the transformation roadmap process"[129] was reflected in the requirement to provide Rumsfeld a "Strategic Transformation Appraisal":

> The transformation process will be evaluated in an annual appraisal to be written by the Director, OFT and submitted to the Secretary of Defense no later than January 30. These appraisals will evaluate and interpret progress toward implementation of all aspects of the transformation strategy, recommending modifications and revisions where necessary.[130]

To be sure, there were a myriad of other tasks,[131] but for the services, USJFCOM, and OFT, the *TPG* identified a formal vision-analysis-reporting cycle as the most significant of their responsibilities. The Secretary, and to some degree, the services and USJFCOM owned the vision. Analysis and reporting would be an inter- and intra-organizational effort among USJFCOM, the services, and OFT.

By insisting that the Department's definition of transformation be used, it is clear that Rumsfeld understood the definition's potential to introduce dissent, and to degrade the dialogue into an argument over terms. In order to avoid such an outcome, the *TPG* offered a baseline definition, but with little additional language as if to avoid contextual interpretations:

> Transformation is "a process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world."[132]

While the easiest approach to compliance would be simply to use the *TPG*'s definition, word-for-word, this methodology was not directed in the *TPG*. And there are indeed inconsistencies between

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[127] Moreton Rolleston (AF/A8X), telephone interview with author, November 27, 2007. Richard Webster (Capabilities Processing Branch, Marine Corps Combat Development Command), interview with author, February 14, 2008. Robert Fix (Chief, Army Transformation Office), interview with author, February 15, 2008.
[128] Rumsfeld, *TPG*, 29-30. See Chapter 3 of this paper for additional discussion of the "six transformational goals."
[129] Ibid., p. 12.
[130] Ibid., p. 14.
[131] Ibid., p. 23-27.
[132] Ibid., p. 3.

the services. It is likely, nonetheless, that Rumsfeld would insist that the major components be addressed in each service's definition. Those components include the following:

- Identification of transformation as a process that attempts to shape the calculus of military competition and cooperation
- Involves combinations of concepts, capabilities, people and organizations
- Exploits national advantages
- Protects against asymmetric vulnerabilities
- Looks to sustain the American strategic preeminence

The Army is the only service that used the department's definition, nearly word-for-word.[133] However, it supplemented this definition with an amplifying strategy that strongly parallels the three-part strategy it outlined after Operation Allied Force.[134]

In its 2003 and 2004 *Transformation Flight Plans,* the Air Force not only included the Secretary's word-for-word definition, but also offered a service-specific working definition in an entire chapter dedicated to explaining what the term was and what it was not.[135] The Air Force's "working definition" of transformation was:

A process by which the military achieves and maintains advantage through changes in operational concepts, organization, and/or technologies that significantly improve its warfighting capabilities or ability to meet the demands of a changing security environment.[136]

While this working definition identifies transformation as a process, and to some degree, acknowledges asymmetric vulnerabilities, it places greater emphasis on the role of new technologies and on warfighting than does Rumsfeld's definition. Furthermore, it diminishes the role transformation has in shaping the international military calculus. With regard to the reason for this working definition, Moreton Rolleston, author of much of the service's transformation literature, explains that the Air Force actually developed this definition before OFT released its definition, considered the service's definition to be better than OFT's version, and elected to continue reference to it.[137]

Unlike the Army and the Air Force, the Navy never directly addresses the Secretary's definition in its roadmaps, but embeds a slightly different definition:

The transformation of America's naval forces is a continuous process, one that includes changes in the way we train, educate and employ our people; the way we organize and equip our warfighting formations; and the processes by which we distinguish and develop the naval capabilities that will be needed by future joint forces.[138]

While acknowledging that transformation is a process and involves changes in concepts, capabilities, people and organizations, this definition omits transformation's role in shaping how potential

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[133] United States Army, *United States Army Transformation Roadmap 2003*, (Washington, DC, 2003), ix. The Army reiterated this exact definition United States Army, *2004 Army Transformation Roadmap*, (Washington, DC, 2004), p. 1-3.

[134] *United States Army Transformation Roadmap 2003*, 1-2. However, the 2003 roadmap makes little reference to this strategy's lineage prior to 2003. In fact, it mentions that this strategy is derived from several sources, all of which are related to Rumsfeld's tenure in office.

[135] United States Air Force, *The US Air Force Transformation Flight Plan*, (Washington, DC, 2003), 5-12; and United States Air Force, *The US Air Force Transformation Flight Plan*, (Washington, DC, 2004), 5-12. In each case, Chapter 2 discusses Transformation's definition. The 2003 and 2004 chapters are nearly identical, word-for-word, to one another.

[136] *The US Air Force Transformation Flight Plan*, (Washington, DC, 2003), p. 10.

[137] Rolleston, interview with author, February 15, 2008.

[138] United States Navy, *Naval Transformation Roadmap 2003: Assured Access & Power Projection...From the Sea*, (Washington, DC, 2003), p. 1.

enemies and allies will view the transformed American military. Later, in an amplifying discussion, the Navy makes tangential reference to its role in preserving American military preeminence, but it makes no reference to asymmetric vulnerabilities or enduring national strengths.

To be fair, the *TPG* never specified that the services directly address the departmental definition, nor did the Navy's roadmap specifically disregard this definition. The service may have considered the definition and its attributes to be self-explanatory. Nonetheless, by omitting any extended discussion on definitions, the Navy's roadmap subjects the service to some outside criticism—and could distract policymakers from core issues.

As would be expected, each service devoted significant portions of their roadmaps to these next three tasks:

- Specify "when and how capabilities will be fielded."
- "Identify critical capabilities from other services and agencies required for success."
- Identify changes to organizational structure, operating concepts, doctrine, and skill sets of personnel."[139]

And while they pursued these tasks within the realm of what they produced from 2002 to 2003, the services used their roadmaps as an opportunity to clarify their visions, to align them with *TPG* guidance, and to describe what they needed from the other services and agencies. And through their answers to these tasks, they realized the greatest value of the *TPG* process.

The Army described its program within the department's four Joint Operating Concepts (JOC): major combat operations, stability operations, strategic deterrence, and homeland security.[140] With a chapter devoted to each JOC, they described the Army's understanding of the respective JOC, how components from the legacy, interim, and objective forces will contribute to accomplishment, and how the other services and agencies can support successful achievement of the JOC.[141] Finally, the Army discussed in detail how they intended to build this force through its existing doctrine, organization, training, materiel, leadership and education, personnel, and facilities (commonly called DOTMLPF) process.[142]

With the Army's 2004 Roadmap, the service refined its message in presentation only. While remaining faithful to the JOCs, this roadmap did not emphasize the JOCs to the same degree. Rather, the Army dedicated specific chapters to its understanding of jointness, its method of presenting forces to warfighting commanders, as well as its DOTMLPF approach to its organize, train, and equip roles.[143] In spite of these changes, however, the core message remained unchanged between 2003 and 2004 and it answered each task in detail and with consistency between the two versions.

In 2003, the Air Force likewise acknowledged the four JOCs, but was less structured than the Army in describing how it intended to support them. Like the Army, the Air Force discussed its understanding of each JOC. But rather than suggesting specific organizations that would support the JOCs, it used a chart to show which "transformational capability" would support each respective JOC. For example, the Air Force transformational capability, "denial of an adversary's access to space services," supports all four JOCs, however this capability was not a specific organizational structure, but a capability that the service sought to embed force-wide.[144] In all, the Air Force identified sixteen such capabilities, but few specific organizations linked to them.[145] Later in the publication, the Air Force

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[139] Rumsfeld, *TPG*, p. 29.
[140] *United States Army Transformation Roadmap 2003*, p. iii–vi. See also, Rumsfeld, *TPG*, p. 31.
[141] *United States Army Transformation Roadmap 2003*, pp. 3-1 – 6-4.
[142] Ibid., pp. 8-1 – 8-25.
[143] *2004 Army Transformation Roadmap*, pp. 2-1 – 2-15, 5-1 – 5-21.
[144] *The US Air Force Transformation Flight Plan*, (Washington, DC, 2003), pp. 20.
[145] Ibid.

discusses its "six distinctive capabilities,"[146] the current and proposed systems and platforms that support them, and how the other services and agencies could support the Air Force's endeavors.[147] In 2003, the Global Strike Task Force remained the only new Air Force organizational concept.

By time the 2004 *US Air Force Transformation Flight Plan* appeared in print, the Global Strike Task Force would be replaced with a series of six new Air Force-specific concepts of operations, or what the service called, "CONOPS."[148] These CONOPS supported multiple JOCs and addressed "global mobility," "global persistent attack," "global strike," "homeland security," "nuclear response," and "space and C⁴ISR."[149] Outside of introducing these new CONOPS and a few terminology changes, the core message and general approach otherwise remained unchanged between 2003 and 2004.

The USAF's 2004 approach closely mirrors the Navy's approach, and as with both the Army and the Air Force, the Navy's message did not fundamentally change from 2002 through 2004. The Navy's 2003 roadmap addresses the Joint Operating Concepts, but only at a cursory level. Whereas the Army initially made the JOCs fundamental to its roadmap, and the Air Force explicitly linked its capabilities and CONOPS to the same JOCs, the Navy offered essentially a table that shows which of their concepts[150] support which of the four JOCs.[151] Beyond the document's introduction and a brief introductory paragraph that discusses the table, the Navy's roadmap makes little additional reference to the JOCs throughout the roadmap's remainder.[152]

The *Naval Transformation Roadmap 2003* focused alternatively on the four concepts the service outlined in 2002[153] and answered all the *TPG*'s tasks within detailed descriptions of them. Discussion included near, intermediate, and long term goals within the realm of projected funding targets for significant projects. Each concept description also included discussion about how the other services and agencies could support the Navy's efforts.[154] Whereas the Army and Air Force each offered a formal chart that cross-references the *TPG* tasks with passages in their roadmaps, the Navy omitted this tool.[155] Nonetheless, while the Navy's 2003 roadmap differed from those of the other services, it does represent at least a staff effort through which it answered the majority of the *TPG*'s tasks.

The Navy's 2004 roadmap however, represents a significant departure from the *TPG*'s tasks and fails to answer many of them. Focus in 2004 was, again, on describing the service's four concepts, and discussing Naval-Marine Corps jointness. There existed no language within the document describing the new 2004 product as an update to the 2003 document. Furthermore, as if to tell OFT and the Defense Secretary to "go find it yourself," the document's forward notes that "detailed descriptions of the transformational programs described in the roadmap including development and fielding timelines and required resources will be provided in the Fiscal Year 2004-2009 Program Objective Memorandum."[156] While OFT's responses to the service approaches will be discussed later in this

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[146] Ibid., 50. These capabilities are "air and space superiority," "information superiority," "global attack," "precision engagement," "rapid global mobility," and "agile combat support."

[147] Ibid., pp. 49-74.

[148] *The US Air Force Transformation Flight Plan*, (Washington, DC, 2004), pp. 41-42.

[149] Ibid.

[150] Sea Shield, Sea Strike, Sea Base, and FORCENet.

[151] *Naval Transformation Roadmap 2003: Assured Access & Power Projection...From the Sea*, p. 5.

[152] Ibid., pp. 1-5, 7, 10, 69.

[153] Sea Strike, Sea Base, Sea Shield, and FORCENet.

[154] *Naval Transformation Roadmap 2003: Assured Access & Power Projection...From the Sea*, 12-80.

[155] *United States Army Transformation Roadmap 2003*, pp. vi – vii; *2004 Army Transformation Roadmap*, pp. v-vi.; T*he US Air Force Transformation Flight Plan*, (Washington, DC, 2003), pp. A-1 – A-2; *The US Air Force Transformation Flight Plan*, (Washington, DC, 2004), pp. A-1 – A-2.

[156] United States Navy, *Naval Transformation Roadmap: Power and Access...From the Sea: Sea Strike, Sea Shield, Sea Basing*, (Washington, DC, 2004), p. ii.

section, it is important to note that OFT mildly chided this approach in its first Strategic Transformation Appraisal:

> [The] process of POM [Program Objective Memorandum] development was not linked to concepts for the use of force in wartime. Instead, the annual cycle of POM submissions was driven by incremental changes to existing service programs. This was acceptable so long as the major military threat to the nation remained focused on one well-defined adversary. But the new threats are diffuse and rapidly evolving.[157]

Nonetheless, at least in 2003, the Navy's approach to the final significant *TPG* task, "devise metrics to address the six transformational goals and transformational operating concepts,"[158] mirrored the other services. Format was primarily in chart form, with a list of organizations, concepts, or capabilities in the vertical axis, and with the six critical operational goals listed across the top. In the spaces where the two axes intersected, the services assessed how their transformational program met the goals, largely on a qualitative basis.[159] The Army's and the Air Force's roadmaps did, however, offer additional discussion as to how they came to these assessments.

Taken as a complete set, the service-specific 2003 and 2004 roadmaps offer five insights on the nature of transformation at the service level. First, there was variation in how the services perceived transformation in spite of existence of a singular, top-down definition. This disparity translated later into variations in other critical concepts and supporting sub-concepts that only hampered the greater joint discussion. The Navy's FORCENet approach to Network Centric Warfare (NCW), for example, may have served the other services well, but with the allowance of service-specific interpretations of, and brand names for NCW, the discussion became muddled, and at times downright confusing.[160] In all, these diverging definitions drove varying approaches to the services' program descriptions and made their roadmaps hard to assess on a standardized basis.

Second, and closely related to the first insight, each service had extensive transformational programs that predated the *TPG* and sought to make their programs fit the *TPG* model. There were both good and bad aspects to this situation. At their best, the roadmaps represented an honest review of how the services' visions met the Secretary's direction with concrete analyses and hard descriptions of how they would become truly joint. Examples include the discussions of joint interdependencies and near-, middle-, and long-term priorities. At their worst, however, the roadmaps were simply staff reporting tools. For example, with the task to evaluate their programs against transformation's six operational goals, the services turned some portions of their assessments into simple, staff-oriented, bureaucratic outputs, thereby offering limited opportunities for an actionable OFT-level assessment.

Third, the services' new capabilities, concepts, and organizations had broad application to multiple goals and mission types. For example, the Air Force's Advanced Standoff Cruise Missile concept addresses three of the six critical operational goals.[161] Without the *TPG* process, it is possible that operational planners would have overlooked such applications in future campaign plans.

The fourth insight is closely related to the third. Taken as a complete set, the services' roadmaps clearly demonstrated that there were indeed multiple service-specific providers of transformation's list of new capabilities in support of the four Joint Operating Concepts. Likewise, with honest service descriptions

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[157] OFT, Department of Defense, "The Strategic Transformation Appraisal for FY-2004" (Washington, DC, 2004), p. 6.

[158] Rumsfeld, *TPG,* p 30.

[159] *United States Army Transformation Roadmap 2003*, pp. A-1 – B-1; *The US Air Force Transformation Flight Plan*, (Washington, DC, 2003), pp. C-1 – C-21; *The US Air Force Transformation Flight Plan*, (Washington, DC, 2004), pp. C-1 – C-12; *Naval Transformation Roadmap 2003: Assured Access & Power Projection...From the Sea*, p. 6.

[160] The Army used the term, "Battle Command." The USAF offered no concrete "brand name" to NCW, but it did discuss "AOC as a Weapons System." Each service's approach to NCW had similarities, but also some critical differences.

[161] *The US Air Force Transformation Flight Plan*, (Washington, DC, 2003), p. C-15.

of required support from the other services and outside agencies, OFT was able to identify potential operational gaps. The gains are two-fold. First, the Secretary would be able to assess the overall transformation effort in a resource-constrained environment and make conscious decisions to limit excessive overlap and duplication. Second, operational planners gained additional options through which to achieve their desired effects, thereby moving the services closer to true joint modularity.

Finally, it is important to note that in spite of Rumsfeld's "bully pulpit" reputation, and the existence of the OFT Director as the transformation czar, the services did not always fulfill the *TPG* tasks completely, at least via their roadmap requirements. Table 3 offers a summary of the services' approaches to the five most critical *TPG* tasks.

| Critical *TPG* Task | Transformation Roadmap/Flight Plan | | | | | |
| | US Navy | | US Army | | US Air Force | |
	2003	2004	2003	2004	2003	2004
Apply *TPG* Definition of Transformation.	Partially	Did Not	Fulfilled	Fulfilled	Partially	Partially
Specify when and how capabilities will be fielded.	Fulfilled	Did Not	Fulfilled	Fulfilled	Fulfilled	Fulfilled
Identify critical capabilities from other services and agencies required for success.	Fulfilled	Did Not	Fulfilled	Fulfilled	Fulfilled	Fulfilled
Identify changes to organizational structure, operating concepts, doctrine, and skill sets of personnel.	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Partially	Fulfilled
Devise "metrics to address the six transformational goals and transformational operating concepts.	Partially	Did Not	Fulfilled	Fulfilled	Fulfilled	Fulfilled

Key:

Fulfilled *TPG* Task

Partially Fulfilled *TPG* Task
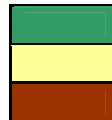
Did Not Fulfill *TPG* Task

Table 3: Assessment of Service Roadmaps

If the services' transformational efforts diverged, then USJFCOM's *Joint Transformation Roadmap* represented the first opportunity to bring them together, especially with regard to terminology and highlighting excessive overlap and gaps between the services. As described in the *TPG,* USJFCOM's concept development and experimentation roles had three parts. First, it conducted joint concept development and experimentation as assigned by the Chairman of the Joint Chiefs of Staff (CJCS). Second, USJFCOM coordinated joint concept development and experimentation between the regional and functional combatant commands. [162] Third, the command was responsible for recommending to the CJCS changes to these joint concepts based upon outcomes of this experimentation. [163] While not stated explicitly in the *TPG,* USJFCOM additionally had the opportunity and non-parochial credibility to be the organizational foremost among joint peers, thereby standardizing transformational language and terminology between the services and combatant commands. For this to be successful, USJFCOM's authority would need to be acknowledged by the services and combatant commands. Whether due to USJFCOM's unwillingness to step into this role, or the services' unwillingness to acknowledge it remains unclear, but the fact remains that this standardization did not occur. As evidenced by its own *Joint Transformational Roadmap,* USJFCOM focused primarily upon its explicit roles in concept development and experimentation—and introduced additional terminology into the dialogue.

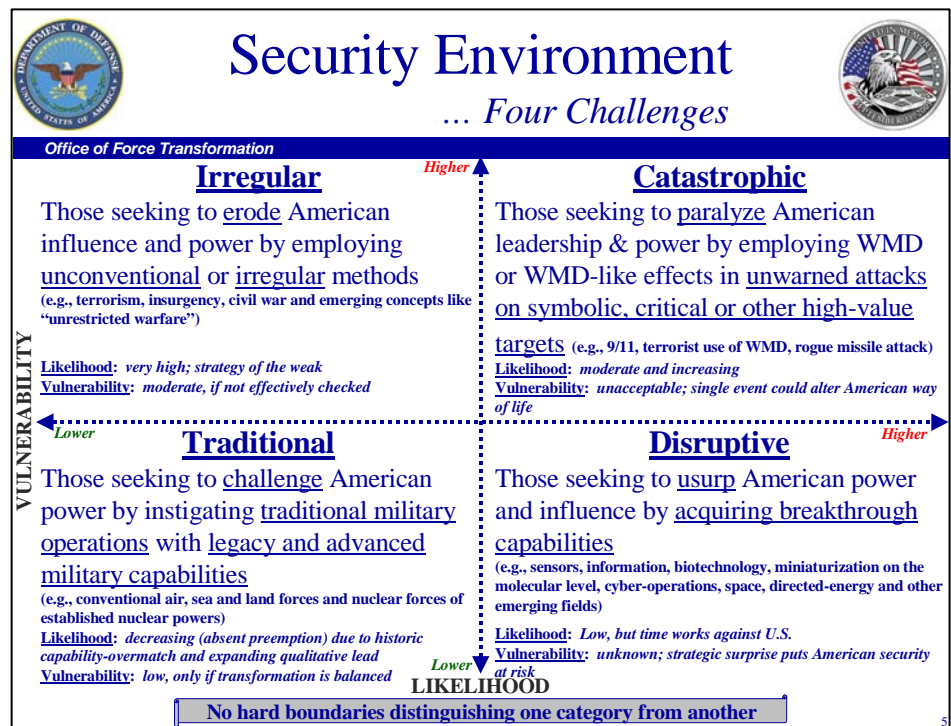USJFCOM's discussion was by any measure thorough. Acknowledging the *TPG* definition of

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[162] EUCOM, PACOM, SOUTHCOM, NORTHCOM, AFRICOM, TRANSCOM, STRATCOM and SOCOM.
[163] *TPG*, pp. 12-13.

transformation, the roadmap made clear references to the four specific Joint Operating Concepts (JOCs) and how the service's occasionally discrete capabilities could be blended in an inter-agency environment to meet the combatant commands' warfighting requirements.[164] However, the largest part of USJFCOM's roadmap discussed additional broad concepts. These included Joint Command and Control; Joint Intelligence; Joint Science and Technology; Joint Deployment, Employment and Sustainment; and Joint Training and Professional Military Education.[165] The roadmap added an additional term to the NCW debate: the Global Information Grid; and discussed USJFCOM's approach to Joint Concept Development, Experimentation and Prototyping.[166]

In its roadmap's conclusion, USJFCOM did offer several noteworthy recommendations for the joint community. First, noting the services' inability to coordinate their roadmaps with each other, USJFCOM recommended staggering service roadmap due dates in order to allow for more thorough inter-service coordination and realigning the due dates in order to be more valuable to budgeting processes.[167] Second, the USJFCOM roadmap highlighted the need for greater specificity in joint and service-specific concepts and capabilities.[168] Third, USJFCOM discussed the requirement to standardize service and joint network architectures within the boundaries of current and near-term technologies.[169] Fourth, and related to the third recommendation, USJFCOM argued for the need to ensure that international partners and allies "introduce some modicum of [command and control] transformation."[170] And finally, USJFCOM encouraged strengthening the Joint Science and Technology process to ensure effective linkages to concrete joint warfighting capabilities.[171] In all these recommendations, one theme remains consistent. USJFCOM sought to use the roadmap process to derive actionable joint approaches vice simple staff production to achieve Transformation.

Like the services, OFT completed two *Strategic Transformation Appraisals* in 2003 and 2004, with the 2004 appraisal being the more thorough of the two. In its first appraisal, OFT introduced an analytical approach that admittedly was not previously offered to the services and USJFCOM (figure 6):[172]

Security Environment
... Four Challenges

Office of Force Transformation

Irregular
Those seeking to erode American influence and power by employing unconventional or irregular methods (e.g., terrorism, insurgency, civil war and emerging concepts like "unrestricted warfare")
Likelihood: *very high; strategy of the weak*
Vulnerability: *moderate, if not effectively checked*

Catastrophic
Those seeking to paralyze American leadership & power by employing WMD or WMD-like effects in unwarned attacks on symbolic, critical or other high-value targets (e.g., 9/11, terrorist use of WMD, rogue missile attack)
Likelihood: *moderate and increasing*
Vulnerability: *unacceptable; single event could alter American way of life*

Traditional
Those seeking to challenge American power by instigating traditional military operations with legacy and advanced military capabilities (e.g., conventional air, sea and land forces and nuclear forces of established nuclear powers)
Likelihood: *decreasing (absent preemption) due to historic capability-overmatch and expanding qualitative lead*
Vulnerability: *low, only if transformation is balanced*

Disruptive
Those seeking to usurp American power and influence by acquiring breakthrough capabilities (e.g., sensors, information, biotechnology, miniaturization on the molecular level, cyber-operations, space, directed-energy and other emerging fields)
Likelihood: *Low, but time works against U.S.*
Vulnerability: *unknown; strategic surprise puts American security at risk*

VULNERABILITY · Higher · Lower · LIKELIHOOD · Higher · Lower

No hard boundaries distinguishing one category from another

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[164] United States Joint Forces Command, *Joint Transformational Roadmap,* (Norfolk, 2004), pp. 30-41.
[165] Ibid., pp. 77-150, 164-178.
[166] Ibid., pp. 50-77, 151-163.
[167] Ibid., p. 180.
[168] Ibid.
[169] Ibid., p. 181.
[170] Ibid., p. 182.
[171] Ibid.
[172] OFT, "The Strategic Transformation Appraisal for FY-2004" (Washington, DC, 2004), p. 2.

Figure 6: OFT's New Analytical Model[173]

> It divides the challenges to national security into four types: "traditional," "irregular," "catastrophic," and "disruptive." [The approach considers each type of] challenge and also roughly estimates the likelihood of each challenge and the vulnerability of the US over time to each challenge.[174]

By placing the joint and service capabilities in the categories against which they would respond, OFT and the Secretary could gain an effective snapshot assessment of how forces are balanced. While the first *Strategic Transformation Appraisal* did not formally present such a snapshot as part of its text, OFT did note that the majority of US capabilities fell in the "traditional" quadrant.[175] Not surprised by this outcome, OFT further observed that "with no 'peer competitor' to confront, the armed forces of the US may be inadequately prepared to deal with one or more of the major strategic challenges now facing the country."[176] In other words, OFT was concerned that the Department continued to focus on the areas in which the threat was least likely and the nation faced low vulnerability.

The first appraisal also highlighted that the service roadmaps did not discuss what OFT called "the economics of defense."[177] In OFT's view, three such issues deserved attention. First, the service roadmaps failed to note that the "projected costs of sustaining and modernizing the current force in its present form were greater than the nation could afford." Second, the roadmaps presented no strategies through which the services would divest themselves of legacy systems and organizations. And third, OFT found little analysis of which transformational capabilities could be neutralized by potential enemies via low cost or significant effort, how the Department would respond, and at what cost to the Department.[178]

OFT also introduced the concept "issues of regret" as "opportunities that our successors will wish we had exploited."[179] These included the lack of a coherent departmental plan for non-kinetic systems, such as lasers, and on-call space-based capabilities, among others.[180]

Broad conclusions based upon the 2003 roadmaps included a "good news" assessment that, "taken together, the service and joint roadmaps paint a portrait of a force that will…grow increasingly joint, dramatically more effective, and more skilled at multinational operations."[181] Areas for improvement included the economic and "issues of regret" discussions noted above, the need to focus beyond traditional warfare, and the removal of barriers to transformation, most notably the cultural barrier.[182] Similar to USJFCOM's roadmap, the appraisal recommended that departmental science and technology investments be linked to defense strategies.[183] In all, OFT concluded that the appraisal's publication marked the completion of a successful first *TPG* cycle.[184] The 2003 roadmaps were internally consistent and they generally supported the JOCs.[185]

Applying a refined version of the new four part analytical model and "issues of regret" approach, the

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173   Ibid.
174   Ibid.
175   Ibid.
176   Ibid.
177   Ibid, p. 3.
178   Ibid.
179   Ibid., p. 30.
180   Ibid,. pp. 31-32.
181   Ibid., p. 4.
182   Ibid., p. 42.
183   Ibid., p. 37.
184   Ibid., p. 4.
185   Ibid., p. 8.

2004 *Strategic Transformation Appraisal* clearly shows that the *TPG* process matured over the previous year—for four reasons. First, the 2004 appraisal clarified the relationship between the four types of war (traditional, disruptive, catastrophic, and irregular [see figure 1]) and the four Joint Operations Concepts (JOCs). In short, each JOC would have to address characteristics from the four types of warfare. For example, the Homeland Security JOC included, among many others, required capabilities such as, "Support[ing a] prompt and coordinated federal response" (from the irregular warfare quadrant); "Prepar[ing] for and mitigat[ing] effects of multiple simultaneous CBRNE events" (from the catastrophic warfare quadrant); and "Cyber threats to DOD assets in the homeland" (from the disruptive warfare quadrant).[186]

Second, the 2004 appraisal discussed the department's progress against recommendations made in the previous appraisal.[187] The news was not always good. While noting joint and Pentagon-level progress on improving capabilities in irregular, catastrophic, and disruptive challenges to security, the report had little to say about service efforts to that end.[188] Related to the 2003 appraisal's discussion on the economics of defense, the report lamented that the Department and the services still, as of 2004, failed to grasp the differences between "budgets" and "costs."[189] Other examples exist, and each indicates implied, if not explicit, OFT expectations for the services and the department to take action based upon appraisal recommendations.

And as a third example of procedural maturity, OFT, with the 2004 *Strategic Transformation Appraisal*, made several additional strategic-level observations. First, OFT "*found no major joint effort in the roadmaps to develop either new forms of heavy airlift or to dramatically reduce existing demands on air transport capabilities*" [emphasis in original].[190] Second, on several fronts, to include camouflage, sensors, and directed energy weapons, OFT noted a preeminent service-level focus on how the US would apply these capabilities against potential enemies, and less on how to combat enemy uses of similar capabilities. And third, OFT noted the department's requirement for what it called integration at the "horizontal," meaning between governmental disciplines, and "vertical," meaning between the federal, state, and local; sectors.[191]

The fourth example of procedural maturity is the fact that OFT brought its analyses into greater detail. The 2004 appraisal listed and cross-referenced not only those joint capabilities that each service provides in support of the JOCs, but also that the services need from each other and from other agencies in order to gain success in an operational setting.[192] Some of the observations made in 2003 remained the same—namely excessive service focus on traditional warfare, inadequate understanding of defense economics, and inter-theater lift shortfalls, among others. But with this more thorough approach, one can see greater applicability of the *TPG* process as a tool for decision-making by the Secretary and the services.

The 2004 *Strategic Transformation Appraisal's* conclusions demonstrated solid consistency throughout the report. First, it argued for a "Goldwater-Nichols" equivalent to interagency operations, with both horizontal and vertical integration of national security capabilities.[193] Second, it reiterated the need to resolve the inter-theater lift shortfall, either by devising alternative airlift strategies, such as lighter-than-air transport, or by reducing the demand on airlift.[194] The third and fourth conclusions

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[186] OFT, Department of Defense, *2004 Strategic Transformation Appraisal*, (Washington, DC, 2005), p. 12.
[187] Ibid., p. 2.
[188] Ibid., pp. 2-3.
[189] Ibid., p. 4.
[190] Ibid., p. 13.
[191] Ibid., p. 17.
[192] Ibid., pp. 22-71, 72-76.
[193] Ibid., p. 18.
[194] Ibid., p. 19.

reflected analytical shortcomings against enemy uses of sensors and directed-energy weapons.

In spite of the obvious strengthening of the *Strategic Transformation Appraisal* in 2004, there are some notable gaps in the report. First, the appraisal did not directly recommend tasking any service to address joint capability shortcomings. For example, in spite of the Army's need for inter- and intra-theater lift, the report never recommended that US Transportation Command or its components answer the requirement. Second, the appraisal never challenged organizations like the Office of the Secretary of Defense, the Joint Staff, or USJFCOM to introduce standardized terminology or "brand names" as related to transformation. And third, the report does not require the services to restructure future roadmaps to reflect OFT's four-part analytical model. Finally, OFT did not discuss recommendations from the services and USJFCOM to adjust the mechanics of the *TPG* process. The previously discussed USJFCOM recommendations to stagger the service's roadmap due dates and to align the timelines with the programming and budgeting processes certainly deserved some attention, for example. There may be several similar examples, but they are all indicative of a prevalent theme. As of 2004, OFT fell short of its role as the organizational czar of transformation, and failed to strengthen the processes' potential as a forum for joint coordination.

In all, this period reflected tremendous energy toward the transformation process. The services, USJFCOM and OFT demonstrated noteworthy creativity and dedicated significant energy toward the process outlined in the *Transformation Planning Guidance*. While there is evidence that the services and other organizations viewed some of their responsibilities as yet another bureaucratic requirement, they also outlined approaches that reveal a serious understanding of the process and desire to transform.

Cebrowski proved himself to be a credible advocate of transformation. Not afraid to "ruffle feathers" with his and OFT's ideas, he gained significant allies, such as US Senator Olympia Snowe and Andrew Krepinevich. He clearly had the trust of Rumsfeld himself.[195] Cebrowski's leadership was clearly a bright spot for the period and he possessed the presence to keep the *TPG* process on track.

However after two years, the services did not alter their visions significantly from what existed during the period prior to the *TPG,* even though they collectively understood the RMA's potential and worked to harness its possibilities. The more relevant matter at this point questions the degree to which Rumsfeld expected the services to wipe their transformational slates clean and start anew with his arrival in office. To this end, the Air Force staff at least perceived this to be Rumsfeld's expectation—and an unfair one at that:

We were told that when [OFT] took office [that] their initial argument was that the military was broken and they had to come in to break china to fix [it]. Much of what [OFT] deemed "transformation" were programs that were started before they got there.[196]

Other services' staff officers are reluctant to offer such a blunt observation. However, they do consistently note that while the staffs wholeheartedly agreed with his message, they railed against Rumsfeld's aggressive attitude,[197] and resented OFT's intrusive role.[198] For OFT's part, Terry Pudas asserts that this was not the office's intent. Contrary to his reputation as one to ruffle feathers, Cebrowski insisted that OFT would be a "catalyst to change" and demonstrate a collegial approach first with the goal of unifying and guiding transformation.[199]

But the fact remains that a unified approach is not abundantly clear. In spite of OFT's four-part

[195] Roxana Tiron, "Military-transformation agency at crossroads after Cebrowski," TheHill.com, September 15, 2005, http://the hill.com/the-executive/military-transformation-agency-at-crossroads-after-cebrowski-2005-09-15.html (accessed January 28, 2008).
[196] Rolleston, interview with author, February 15, 2008.
[197] Webster, interview with author, February 14, 2008 and Fix, interview with author February 15, 2008.
[198] Garstka, interview with author, February 15, 2008.
[199] Pudas, interview with author, February 14, 2008.

analytical model described in 2003, the services and USJFCOM did not alter their methodologies to facilitate OFT's analyses. Terminology remained muddled. There is little formal evidence that the services took each others needs for action within the *TPG* process. Both the services and USJFCOM had the latitude to bridge these gaps on their own initiative, but neither the Secretary nor OFT insisted on such action.

John Garstka reinforces Pudas' assertion that Cebrowski made OFT more collegial than intrusive, mostly because OFT was neither staffed nor funded to be a truly disruptive—or intrusive—advocate for transformation. The office of twenty personnel had no General Officer-equivalent leadership, and no ability to shape directly the Department's budgetary activity. He further observed a lack of consensus between the services, the Secretary, OFT, and USJFCOM on "where we wanted to go" because of unarticulated challenges and opportunities.[200]

As it is, by August 2005, the department suspended the Transformation Roadmap-Strategic Transformation Appraisal process.[201] This event was the first of several that further weakened a process already much weaker than initially envisioned by Rumsfeld. As a result, transformation's institutionalization entered its final period, one characterized by a lack of formal guidance.

2005 through 2007: A Process Unguided

> We are at the intersection of unarticulated need and inconsequential change.[202]
>
> *Terry Pudas, Deputy Director OFT* (September 2005)

Terry Pudas' remark characterized the state of transformation's process by 2005. Over time, it would prove to be prophetic. Rumsfeld's conscious decision to put his *TPG* process on hold is the first of two major events that shifted transformation's process from one built upon personality and reputed strong leadership to one not too different than what was evident in the period from 2001 through 2003. In short, Rumsfeld's transformation process, albeit weak, disappeared and service-centric approaches resumed their overwhelming preeminence.

Rumsfeld's decision to pause the *TPG*'s roadmap-appraisal process was linked to the availability of staff resources. It is important to note that the *TPG* process never replaced the large number of products produced by the various service, combatant command, and Pentagon staffs—it was strictly additive. As such, with congressionally-mandated *Quadrennial Defense Review* due in 2005, the competition for staff resources became especially fierce. And faced with this competition for resources, Rumsfeld decided to place the annual *TPG* process on hold, to be resumed in 2006.[203]

The second major event was the Pentagon's August 2006 decision to close OFT.[204] Formally, the new office would be "embedded" within the Office of the Secretary of Defense Policy and Defense Research and Engineering.[205] Terry Pudas, the acting OFT Director, called the event a "realignment" and chastened observers to avoid jumping to conclusions that transformation was dead.[206] But the fact remains that the *TPG* process's leading organizational advocate faded into the greater defense bureaucracy.

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[200] Garstka, interview with author, February 15, 2008.

[201] Sebastian Sprenger, "With the 2005 Transformation Roadmaps Scrapped, OFT Focuses on QDR," *Inside the Pentagon*, August 4, 2005.

[202] Roxana Tiron, "Military-transformation agency at crossroads after Cebrowski," *TheHill.com,* September 15, 2005, http://the hill.com/the-executive/military-transformation-agency-at-crossroads-after-cebrowski-2005-09-15.html (accessed January 28, 2008).

[203] Sprenger.

[204] Josh Rogin, "Defense Transformation Searches For New Identity," *Federal Computer Week,* April 16, 2007, http:// www.oft.osd.mil/library/library_files/article_559_Federal%20Computer%20Week.doc (accessed January 26, 2008).

[205] Terry Pudas, "Embedding Transformation: Cultural change will cross department lines," *Defense News*, September 18, 2006, p. 21, http://www.oft.osd.mil/library/library_files/article_526_Defense%20New3.doc (accessed January 26, 2008).

[206] Ibid.

In spite of promises to the contrary, the *TPG* process did not resume in 2006. Reasons for this decision are not immediately clear. Both Pudas and Garstka observed that competition for staff resources continued to be fierce well into 2006 and beyond.[207] Iraq and Afghanistan remained in the forefront and persistently demanded attention. Moreton Rolleston observes that after 2004, both Rumsfeld's and OFT's tone changed significantly toward the services. Rolleston claims that Rumsfeld was pleased with the services' strategic progress thus far.[208] Perhaps then, these roadmaps were no longer necessary. Or perhaps Rumsfeld intended to deliver on the promise to "embed" transformation. One fact is clear, however: 2006 was a difficult year for Rumsfeld. Operations in Iraq had stagnated and he was under significant political pressure—pressure that resulted in his resignation in November that same year. Whatever the reason, in spite of no formal announcement to terminate the *TPG*'s requirements, the formal process simply faded away and never resumed.[209]

Regardless of these setbacks, some events and activities attributable to the *TPG* period still continued. But there seemed to be a course correction in transformation. While "Transformation with a large 'T'" may have lost its grip, transformational thought did continue in some forms. Examples of this fact exist at both the Departmental and service levels.

The Department can point to three specific instances that suggest continued transformational thought in the post-*TPG* period. The first is in refinement of the transformation vision. With publication of the 2004 *National Military Strategy*, the department officially severed transformation's formal linkage to *Joint Vision 2020,* and used the *National Military Strategy* itself as the guiding vision for Transformation.[210] Second, the department supplemented this vision with the *Capstone Concept for Joint Operations (CCJO)*, published in 2005. The *CCJO* adds depth to the Joint Operating Concepts (JOC) discussion by introducing the Joint Functional Concepts in support of the JOCs, along with Joint Integrating Concepts as additional detail. The complete set of Joint Operating Concepts, Joint Functional Concepts, and Joint Integrating Concepts form an entire family of concepts, termed the Joint Operations Concepts (JOpsC) Family (Figure 7).[211] In terms of content, there was little change. The *CCJO* discusses characteristics of the joint force with terminology similar to *Joint Vision 2020*. However, it does make significant reference to the four types of warfare (traditional, catastrophic, disruptive and irregular) discussed in the first *Strategic Transformation Appraisal*.[212]

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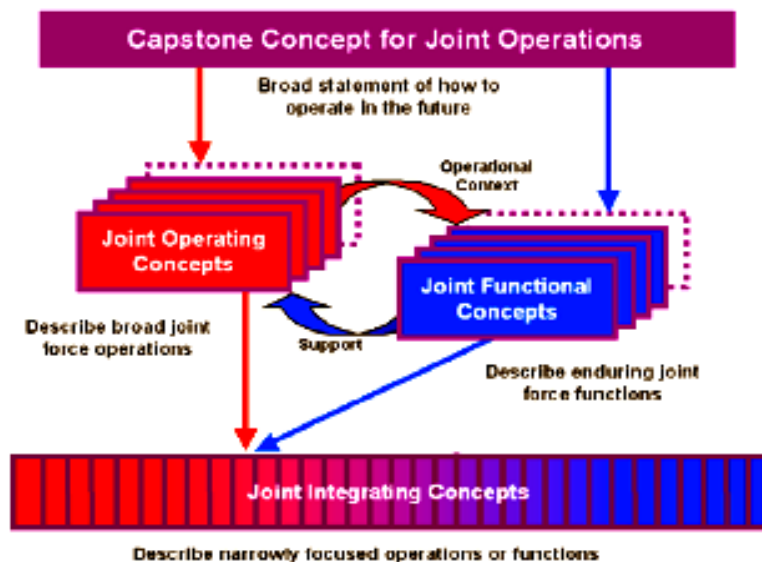
[207] Pudas, interview with author, February 14, 2008; and Garstka, interview with author, February 15, 2008.

[208] Rolleston, interview with author, February 15, 2008.

[209] Pudas, interview with author, February 14, 2008; and Garstka, interview with author, February 15, 2008.

[210] Richard B. Meyers, *The National Military Strategy of the United States of America: Strategy for Today, Vision for Tomorrow,* (Washington, DC, 2004), p. 3.

[211] Richard B. Meyers, *Capstone Concept for Joint Operations* (hereafter, *CCJO*), Version 2.0, (Washington, DC, 2005), p. 3.

[212] Ibid., pp. 6, 20-23.

Figure 7: The JOpsC Family[213]

The third example of continuing Department-level thought is introduction of Joint Capability Areas (JCA) in 2006. The "JCA Baseline Reassessment" describes them as

> collections of capabilities grouped to support capability analysis, strategy development, investment decision making, capability portfolio management, and capabilities-based force development and operational planning.[214]

In simple terms, the JCA concept identifies key strategic-level capabilities (the first being "Tier 1") and then breaks them down over several tiers, leading ultimately to specific systems and organizations. In theory then, they allow the Department to identify capability gaps and excessive overlap, thereby identifying areas toward which resources should be applied.[215]

In spite of their apparent logic, the JCAs have their detractors. A 2007 Joint Staff presentation observes that there are problems with excessive overlap in the functional, domain, operational and institutional areas at the lower tiers, inconsistent prioritization between the Tier 1 JCAs, and inadequate attention given to non-warfighting Departmental responsibilities. [216] Terry Pudas questions the links to multi-role systems, and notices that this approach can disrupt current acquisition programs, thereby delaying fielding and capability realization.[217] Richard Webster, a Marine Corps staff officer, described them as merely "places to put money."[218] Other service's staff officers note that they have not garnered significant attention at their levels.[219] In all, they have been slow to gain momentum, with the latest version gaining approval in early 2008—nearly three years after Secretary Rumsfeld introduced them in May 2005.[220]

Each of the services continued to possess transformation-specific staffs, and they continued to add to the service-specific transformation discussion in this period as well. Consistent with their assertions that the roadmap process was a valuable tool for strategic analyses, the services continued roadmap production, albeit differently from the *TPG*'s model. Colonel Robert Fix, Chief of the Army's Transformation Office, points out that the Army produced a series of strategic documents termed, *The Army Plan*. Informed by Defense Department policies such as the *National Security Strategy*, the *National Military Strategy*, the *Quadrennial Defense Review* and others, *The Army Plan* is the service's "institutional instrument for defining its organizational strategy and directing actions to accomplish that strategy."[221] Noteworthy, is the fact that *The Army Plan* possesses four sections, to include one that identifies specific transformational tasks at the unit, and sometimes individual soldier, levels. These documents are continually updated, with the most recent version released in early 2008. [222] Modularity continues as a priority with twenty-seven of the service's forty-two brigades transformed into self-contained modular units, called Brigade Combat Teams. And acquisition strategy shifted from fielding the interim force to developing and fielding the objective force.[223] In all, the core message has not changed for the Army, but the service's initial timelines have moved significantly to the right.

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[213] Ibid., p. 3.

[214] Referenced in Department of Defense, Joint Staff/J-7, "Joint Capability Areas," PowerPoint presentation (Washington, DC, 2008), p. 3.

[215] Ibid., pp. 4-6.

[216] Ibid., pp. 7-11.

[217] Pudas, interview with author, February 14, 2008.

[218] Webster, interview with author, February 14, 2008.

[219] Roleston, interview with author, February 15, 2008.

[220] John Klein (Joint Staff/J-7), e-mail to author, February 5, 2008.

[221] Fix, interview with author, February 15, 2008.

[222] Ibid.

[223] Ibid.

The Air Force produced an additional roadmap, the *Air Force Roadmap, 2006 > (sic) 2025*, in June 2006. The document includes a significant section on transformation that describes the service's methodology on terms similar to the *TPG*'s process. The document continues to embrace NCW, EBO, space and information operations, and outlines organizational changes.[224] Moreton Rolleston observes that the Global CONOPS series is still alive, and continue to evolve.[225] As with the Army, however, the Air Force's message did not change significantly, and much of the roadmap remains devoted to the service's acquisition program.

For its part, the Navy updated its products as well. The service's annual program guide, *Vision, Presence, Power,* was updated in 2005, and again in 2006, under the title *Sea Power for a New Era*.[226] In October 2007, the Navy released *A Cooperative Strategy for 21st Century Seapower*. This document discusses extensively the Navy's stance on jointness, but with continued emphasis on joint operations along side the US Marine Corps and to some degree, the US Coast Guard.[227] As with its sister services, none of the Navy's post-*TPG* documents introduce significantly new material. Sea Strike, Sea Shield, Sea Base, FORCENet, and Sea Warrior remain the service's core concepts.

In spite of OFT's closure, the Pentagon did initiate a transformation reporting and assessment tool, albeit on a less formal and enduring way. In 2005, the Undersecretary of Defense for Acquisition, Technology, and Logistics directed the Defense Science Board (DSB) to convene the 2005 Summer Study Task Force on Transformation "to assess the DOD's transformation progress."[228] Highlighting strengths in joint integration, global presence, access and reach, and weaknesses in surveillance, precision strike, multi-agency integration, and non-kinetic operations, among others, the DSB's report was, by any measure, frank and thorough.[229] The report included substantial recommendations for improvement. However, the report departed significantly from the analytical approach used by OFT in the *Strategic Transformation Appraisals.* This different approach can be perceived as a strength by some. However, this different approach would also set the stage for service-level disagreements with the results and recommendations, thereby continuing to distract them from the core aim of transformation. To be sure, the report would have had more value alongside an updated *Strategic Transformation Appraisal.* In any case, the attention that the Department paid to the report is unclear. Neither Pudas, nor Garstka, nor any of the service-level staff officers knew of the report in detail.[230]

Even though the Department and the services continued to develop their transformation portfolios, there was a distinct shortfall in efforts to unify their approaches. Outside of standard reporting processes, and enduring Departmental management methods, and a singular DSB report, there was no organizational impetus to standardize and deconflict the service's approaches to transformation. Rumsfeld was distracted from his transformational role as the bully pulpit leader. OFT no longer existed. The *TPG* was defunct at best. As previously observed, transformation returned to a less disruptive and more evolutionary mode of institutionalization.

[224] Department of the Air Force, *Air Force Roadmap, 2006 - 2025*, (Washington, DC, 2006).
[225] Rolleston, telephone interview with author, November 27, 2007.
[226] Department of the Navy, *Vision Presence Power*, (Washington, DC, 2005); and Department of the Navy, *Sea Power for a New Era*, (Washington, DC, 2006), http://www.au.af.mil/au/awc/awcgate/awc-futr.htm#marinevision (accessed February 20, 2008).
[227] Department of the Navy, *A Cooperative Strategy for 21st Century Seapower*, (Washington, DC, 2007), http://www.au.af.mil/au/awc/awcgate/maritime/maritime_strat_oct07.pdf (accessed February 20, 2008).
[228] Defense Science Board, *Defense Science Board Summer Study on Transformation: A Progress Assessment, Vol. 1*, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (Washington, DC, 2006), p. 1.
[229] Ibid.,2.
[230] Pudas, interview with author, February 14, 2008; Webster, interview with author, February 14, 2008; Garstka, interview with author, February 15, 2008; Rolleston, interview with author, February 15, 2008; Fix, interview with author, February 15, 2008.

Transfromation: A Prognosis

> If you don't like change, how are you going to like irrelevance?[231]
>
> General Eric Shinseki, Former Chief of Staff, US Army

As General Shinseki's remark suggests, transformation is hard. And Donald Rumsfeld never promised that his program would be easy. From 2001 through 2004, the services, USJFCOM, and the Department as a whole embraced the effort and made "transformation" one of the hottest words in the Pentagon. However by 2007, as the Global War on Terror entered its sixth year, Rumsfeld was a matter of history, with the Pentagon seemingly shedding everything "Rumsfeld"; and "recapitalization" emerged as the latest trend. Does this suggest then that transformation is dead? Or is Rumsfeld's specific version of transformation dead? And if Rumsfeld's transformation vision is dead, does this demise suggest that his vision failed?

There are few absolutes that apply to transformation as envisioned by Rumsfeld, and institutionalized by the services, the Department, and USJFCOM. And when answering these questions, one finds that this trend of few absolutes continues. Certainly by 2006, with Rumsfeld's departure, OFT's closure, a mixed bag of operational successes in Iraq and Afghanistan, and the services now focused on recapitalization, one may argue that transformation is indeed dead.

But such a sweeping generalization fails to acknowledge the three components of Rumsfeld's transformation vision. The first is the end state, which varied only slightly from what Rumsfeld inherited in the form of *Joint Vision 2020.* The second part is the process he applied. As broadly outlined in presidential guidance and OFT publications such as the *Transformation Planning Guidance,* Rumsfeld, at least initially, pursued a process that was unique to his tenure as the Secretary. And the third part is Rumsfeld's belief in transformation's role as a strategy with the potential to shape the geopolitical calculus of both potential enemies and allies.

By examining the history of transformation's institutionalization, one sees course corrections and compromises that Rumsfeld and OFT made in order to accommodate the services and USJFCOM. Consequent to these accommodations, the prevailing service bureaucracies and cultures remained preeminent. Because Rumsfeld and OFT were unable to overcome these bureaucracies and cultures, one can conclude that the process portion of his vision, and the idea that transformation would be revolutionary as opposed to evolutionary, are largely dead.

But what about the end state and transformation's role as a strategy? Here, the answers are not so clear. Most indications are that the end state still enjoys reasonably broad support within the defense community and among allies—but with a few reservations, particularly among the European allies.[232] Transformation's impact upon potential adversaries remains unclear. Recent growth of the Chinese defense budgets and military capabilities, and questions about whether this growth is response to America's attempts at transformation, certainly deserve continued attention.

In any case, as one analyzes transformation within the US Department of Defense, considerations of jointness, the roles of space and information, and experimentation bear further discussion and analysis. And from this standpoint, most evidence suggests that transformation is alive, but no longer a preeminent priority. The resulting problem is that the effort remains largely unguided, and linked to service-specific perspectives.

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[231] Eric Shinseki, quotation cited on United States Air Force Air War College, "Gateway to the Internet," "Transformation of War & US Military," http://www.au.af.mil/au/awc/awcgate/awc-chng.htm#army (accessed January 17, 2008).

[232] North Atlantic Treaty Organization, "Allied Command Transformation, Transformation Network," http://www.act.nato.int/content.asp?pageid=200 (accessed January 17, 2008). For an alternative view, see Sabine Collmer, "Information as a Key Resource: The Influence of RMA and Network-Centric Operations on the Transformation of the German Armed Forces," Occasional Paper Series No. 8, February 2007 (Garmisch: George C. Marshall European Center for Security Studies, 2007).

Given this mixed answer, the more pressing questions address the "whys" and "what nows" of transformation. For if one accepts that transformation is in fact a worthy effort, some sort of coherent effort needs to continue. And by examining what went wrong in Rumsfeld's effort, one can derive a modified strategy for transformation's next phase.

Evaluating Rumsfeld's Vision

One can evaluate the historical success of Rumsfeld's transformation vision against two categories of standards. The first are those outlined by promises made by George W. Bush in his campaign speech to at The Citadel in 1999. The second category reflects the self-imposed standards implied in the department's own publications and guidance on transformation. And throughout both these categories, anecdotal evidence of what the military achieved in both the organizational and operational environments supplement the core analyses.

By any measure, Donald Rumsfeld was a faithful lieutenant to his President, and the goals of his program reflected presidential guidance on the topic. To be sure, Rumsfeld's program possessed many of the specific goals that then presidential candidate George W. Bush made in a speech at the Citadel in September 1999. Most prominent of these goals are the following:

- Increasing defense budgets as a percentage of gross national product in a targeted manner, including:
  o Closing the military pay gap and improving quality of life programs to reverse a perceived military "brain drain".
  o Increases in research and development budgets.[233]
- Transforming military forces and "skip[ping] a generation of technology" in the following ways:
  o Lighter, more lethal, and easily deployed land forces.
  o Long-range aircraft.
  o Unmanned systems.
  o Expanded use of space systems.[234]

At first blush, Rumsfeld's transformational program fares reasonably well against these standards. The administration's military program included not only increases in take-home pay, but also targeted increases in special pay and reenlistment bonuses, and increases in noncash compensation programs like family-support activities and veterans' benefits. The June 2007 Congressional Budget Office study, *Evaluating Military Compensation*, notes that military pay and noncash benefits, taken in the aggregate, swiftly narrowed the military to civilian pay gap and resulted in a military pay surplus by 2002.[235] But in terms of meeting the specific goal of retaining talent, the outcome is mixed at best. The CBO noted that while generous cash reenlistment bonuses certainly had a positive effect on retention, military members generally made career decisions on a strict take-home-pay comparison basis, and discounted their noncash benefits.[236] For example, since two-thirds of military families do not live on bases, and since much of the current military manpower includes reservists, many members did not value their on-base benefits as much as the administration hoped.[237] Single military members also discounted the myriad of family-support activities that the military offers.[238]

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[233] Bush, "A Period of Consequences."
[234] Ibid.
[235] CBO, *Evaluating Military Compensation*, p. 12.
[236] Ibid., pp. 25-27.
[237] Ibid., p. 27.
[238] Ibid., p. 26.

These details led the CBO to conclude that the improved military benefits package had only a limited effect in some career fields and failed to improve retention in others.[239] To be sure, there are other considerations associated with a member's decision to remain in the military. Among the most significant of these considerations is the impact of multiple, extended deployments; the CBO study did not address this aspect of a member's decision to remain in the military. Nonetheless, the office's conclusions are noteworthy.

In the case of research and development budgets, Rumsfeld clearly met the President's goal. As figure 8 shows, the Pentagon met the President's goal of increasing the department's research and development budget by 20 billion dollars before fiscal year 2006.[240]
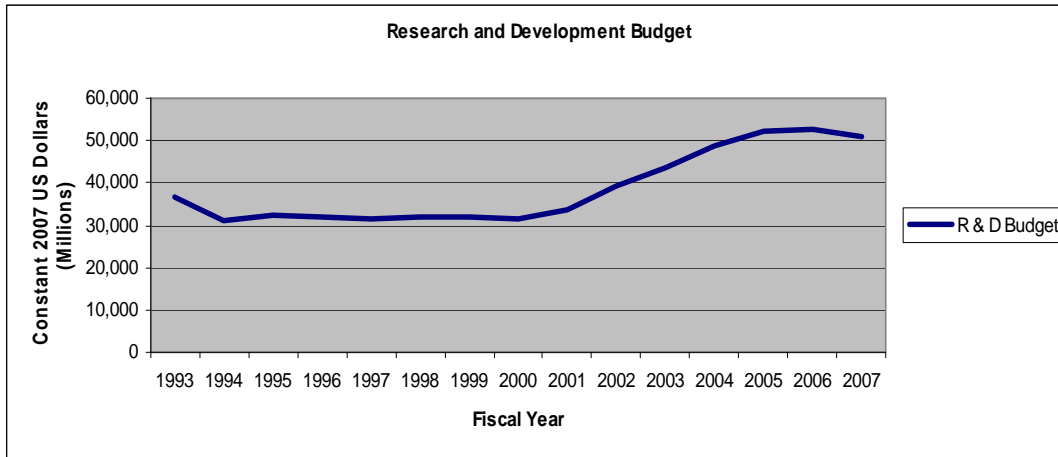

Figure 8: Research and Development Budget[241]

While specific details of the research and development budget are classified, it is clear that, consistent with Presidential and Pentagon guidance, broad attention was given to transformational concepts. On August 26, 2007, the *San Francisco Chronicle* noted that the Defense Advanced Research Projects Agency (DARPA) applied its portion of the research and development budget to concepts such as aerial platforms capable of delivering "ultra precise effects" on nearly zero notice, and to sensing platforms that enable small 13-person ground units to patrol and effectively occupy towns of 100,000 people. DARPA also placed attention upon lighter body armor and upon technologies that led to the Mine Resistant Ambush Protected (MRAP) vehicle's quick development and fielding.242

The Pentagon's success in developing and fielding a new generation of weapons that represent a "skipped" generation of technology is less clear. The defense budgets of the era clearly show increased investments in unmanned systems, information technologies, and space-based platforms.[243] Furthermore, Rumsfeld did make some tough decisions against arguably non-transformational modernization programs. In 2002, the Army's Crusader artillery system was scrapped and the Comanche helicopter program was reduced by half.[244]

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239 Ibid., pp. 23-24.
240 Bush, "A Period of Consequences."
241 Data from Office of the Under Secretary of Defense (Comptroller). *National Defense Budget Estimates for FY 2007* (Washington, DC, 2006), p. 81. Figure produced by author.
242 Tom Abate, "Special Military Group Looks Ahead to Fight America's Future Wars," *San Francisco Chronicle*, August 26, 2007, E1.
243 Department of Defense, "Fiscal 2005 Department of Defense Budget Release," News release (Washington, 2005), http://www.defenselink.mil/releases/release.aspx?releaseid=7046 (accessed September 24, 2007). The entire set of budget releases, available at http://www.defenselink.mil/releases, shows this trend over the period, 2002-2007.
244 Leslie Wayne, "So Much for the Plan to Scrap Old Weapons," *New York Times,* December 22, 2002, http://query.nytimes.com/gst/fullpage.html?res=9C0CE6D61E3DF931A15751C1A9649C8B63&sec=&spon=&pagewanted=print (accessed December 20, 2007). See also Cable News Network, "Army cancels Comanche helicopter," http://www.cnn.com/2004/US/02/23/heli

But other significant, arguably less transformational, programs survived. Notables are the Air Force's F-22, the Navy's CVN-21 aircraft carrier, and the Marine Corps' V-22. Perhaps learning from the Army's experience with the Crusader, the services worked hard in these and other situations to repackage their acquisition programs as "transformational." The Air Force's experience with the F-22 offers a classic case study. Faced with potential cuts in the program, the service changed the plane's designation to F/A-22, thereby highlighting its multi-role capability, and at times engaged directly with Congress to preserve the system.[245] The service declared the system its number one acquisition priority. As a result of this approach, the aircraft's program survived. President Dwight D. Eisenhower's frequently cited warning about the military-industrial complex aside, the key conclusion here is that the services' major acquisition efforts reflected a more incremental perspective than what President Bush expected with his goal to "skip a generation of technology."

New weapons alone do not amount to transformation. Transformation also demands changes in organization, doctrine, culture, and finances. The President's Citadel speech paid less attention to this fact, and is therefore an incomplete standard against which to evaluate Rumsfeld's program. This is not to say, however, that these considerations were overlooked. Early Rumsfeld-era transformation products such as *Military Transformation: A Strategic Approach* and *Transformation Planning Guidance* demonstrate clearly that Rumsfeld understood the breadth and depth of change required by transformation. The promise to transform the military via a "few big jumps" that could challenge service roles and missions is significant, as is the use of jointly-focused annual service roadmaps and Strategic Transformation Appraisals under OFT's leadership. In all, the goal of transforming to an inherently joint, capabilities-based force by changing how the department fights, its business practices, and interagency and coalition operations represents a suitably complete vision.

As a result of this roadmap-appraisal process, the services can indeed point to changes in organization and doctrine that evolved through transformation's institutionalization period. The Army has operational Stryker Brigades and the Air and Space Expeditionary Force concept remains the bedrock upon which the Air Force deploys. Furthermore, the Air Force recently activated its Cyber Command with temporary headquarters at Barkesdale Air Force Base, Louisiana. However, there is credible evidence that portions of Rumsfeld's transformation vision have faded. The Army's formal pursuit of increased modularity and the Air Force's six global CONOPS, while still alive, have collectively faded from the forefront. Naval publications continue to emphasize Sea Base, Sea Strike, Sea Shield, and FORCENet concepts, although Marine Corps growth and recapitalization, and surface vessel acquisitions have captured the limelight.

Similarly for US Joint Forces Command, evidence of continuation in its role as the department's concept development and experimentation arm is mixed. Concept development remains a hot topic. The Joint Operating Concepts (JOCs) as a set continue to be updated. For example, the Secretary of Defense approved the latest version of the Homeland Defense/Civil Support JOC on October 1, 2007. All the other JOCs have been updated within the last year, or are presently under active review.[246] However, most publically available documents suggest that formal, integrated, and long term experimentation plans have not been updated since 2004.[247]

There is operational evidence of transformation's success and continuation in the field. While strategic military operations in Iraq and Afghanistan still hold a broad portion of the public's and US Congress's attention, there are significant, but less noticed, examples of transformation's successes at the tactical

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copter.cancel (accessed December 20, 2007). As noted by CNN, the Army eventually cancelled this program in 2004 in favor of upgrades to its existing helicopter fleet.

[245] Wayne, "So Much for the Plan to Scrap Old Weapons."

[246] United States Joint Forces Command, J-7, "JOpsC Concept Status Update," PowerPoint presentation, December 17, 2007, pp. 2-3.

[247] United States Joint Forces Command, http://www.dtic.mil/futurejointwarfare/experimentation.htm (accessed December 22, 2007).

level—even in counterinsurgency operations. OFT and other appraisals highlight increasing operational and tactical jointness among the services. Networked operating pictures, high-speed command, and quickly-embedded lessons learned programs reflect standard unit-level practices in Iraq, Afghanistan, and other locations. Unmanned systems are a proven success story—as suggested by their high utilization rates in Iraq.[248] US Central Command's June 2006 successful targeting of Iraqi insurgent leader Al-Zarqawi is just one example of successful joint network enabled operations.

Nonetheless, the specific processes initiated by Rumsfeld have lost their collective traction. Rumsfeld suspended the roadmap-appraisal process ahead of the 2005 *Quadrennial Defense Review (QDR)*, and in spite of promises that it would resume after the *QDR*, it never did. The Joint Capability Area approach that he initiated late into his tenure as the Defense Secretary are hard to understand and procedural initiation remains slow.[249]

On October 22, 2007, the *New York Times* published an article based upon an interview with the incoming Chairman of the Joint Chiefs of Staff, Admiral Mike Mullen. And in this interview, Admiral Mullen identified his "three immediate priorities":

- "Develop a military strategy for the Middle East, beyond Iraq and Afghanistan.
- Accelerate efforts to 'reconstitute, reset, revitalize' the armed forces, which he said meant replacing combat equipment and tending to the needs of those in uniform, in particular soldiers and marines and their families.
- Refocus the military's attention beyond the current wars to prepare for other challenges, especially along the Pacific Rim and in Africa."[250]

Noticeably absent is a specific reference to transformation. While there may be subtle transformational elements in his goal to "reconstitute, reset, revitalize" the military, there is no mention of an attempt to skip a generation of weapons. Although interagency and coalition operations will certainly play a role in future Middle East, Pacific, and Africa strategies, there was no specific mention of transformation's role in improving such skills within the military. In all, the absence of any specific mention of transformation highlights that the formal, department-wide process envisioned by Rumsfeld has fallen to a lower priority, if it has not ceased to exist altogether.

If there is agreement that transformation's end state is still viewed by the defense establishment as a worthy enterprise, and that the concept of transformation as a strategy is still growing, but Rumsfeld's formal process has died, then the next relevant question is, "What went wrong?" For a first look, Rumsfeld did initiate what appeared to be a reasonably thorough process. There were, however, three broad reasons for the demise of Rumsfeld's program. First was his failure to enable via OFT or to personally provide the aggressive leadership style required to make the "few big jumps" outlined by his transformation plan. Second, and in parallel with this first reason, Rumsfeld allowed the services to be preeminent in the process. The third reason has to do with the extended operations in Iraq and Afghanistan.

Aggressive Departmental Leadership was AWOL

Whether or not the "few big jumps" model was the right way to pursue transformation is not entirely relevant to the analysis. As discussed in the third section of this paper, there were three credible reasons that explain why Rumsfeld pursued this approach. First, Rumsfeld needed to deliver on a Presidential promise with concrete, demonstrated action. Second, based upon prevalent conservative thought, he needed to leverage whatever was left of the strategic pause to produce a transformed

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[248] Lolita C. Baldor, Associated Press, "Unmanned Planes A Key Tool In Iraq," *Philadelphia Inquirer*, January 2, 2008.
[249] Department of Defense, Joint Staff/J-7, p. 11.
[250] Thom Shanker, "Joint Chiefs Chairman Looks Beyond Current Wars," *New York Times*, October 22, 2007, p. 8.

military. And finally, the events of September 11, 2001 and interventions in Afghanistan and Iraq served to highlight a need for a new type of military. In short, given the inputs he had at the time, Rumsfeld made a reasonably logical choice.

More important is the fact that this approach needed a sense of "bully pulpit" leadership at the Departmental level. Such leadership bears two sets of responsibilities. The first responsibility is focused downward toward the services and USJFCOM. Specifically, he failed to introduce discipline among the services on a wide variety of transformational issues. Among these issues was terminology. Even though the *Transformation Planning Guidance* specified a singular definition of transformation, the processes allowed the services to discount this definition, and at times, make their own "working definitions." By allowing such variances, this made room for service-specific branding of critical concepts. Supporting the Network Centric Warfare concept, for example, USJFCOM discussed the "Global Information Grid," the Navy introduced FORCENet, the Army had "Battle Command" and the Air Force had the "Air Operations Center as a weapons system." While all four concepts embraced network centric warfare, each service added to and subtracted from the core concept such that their comparisons, analyses and integration became tedious and distracting. Consequently, the distinction between global and battlespace network operations (something certainly more important to joint warfighting commanders) fell by the wayside in favor of service-specific approaches to the concept. Similar examples can be found in terms such as Effects Based Operations, modularity, and joint logistics.

Neither Rumsfeld nor OFT formally enforced true joint integration within the *TPG* construct. True, the services needed to identify components of their roadmaps that required joint support, but none of the Strategic Transformation Appraisals recommended that any service take action upon such needs. As another example, the Navy's sense of jointness focused upon its enduring partnership with the Marine Corps, but it paid less attention to its partnership with the Army or the Air Force. OFT never highlighted this shortcoming or other examples of incomplete jointness in any of its appraisals.

These terminology and jointness shortcomings are really the result of two decisions—one by Rumsfeld, the other by Cebrowski. The first decision that limited the effectiveness of Rumsfeld's "Few Big Jumps" approach to transformation was his accommodation of service desires to reduce the *TPG*'s roadmap-appraisal process into a forum for coordination and reporting as opposed to formal decision-making. The second is Cebrowski's collegial approach toward OFT's role. These adjustments took the teeth out of the process and allowed the services to focus inward and, at times, ignore OFT's guidance, thereby eliminating any need to look beyond enduring roles and missions. There was little need for the services to coordinate and integrate their approaches before presentation to Rumsfeld or OFT. As a result, the responsibility to derive concepts, organizations, and systems as "born joint" became sole responsibility of Rumsfeld and OFT, and therefore increasingly unlikely.

This is not to say that the services' perspectives on the *TPG* process were unreasonable. There are indeed several other venues through which Rumsfeld could convey his decisions and priorities. These venues included the Strategic Planning Guidance, Future Years Defense Plan, and the Planning, Program, Budgeting and Execution System, among others. Some of these requirements were statutory; others were internal to the department. All of them competed for staff resources. This competition became especially stiff during 2005 QDR production. As OTF's assistant director, Thomas Hone acknowledged, staff resources were simply not available in 2005 to produce both a *QDR* and execute the roadmap-appraisal process.[251] In all, this was a missed opportunity for Rumsfeld to exercise the second responsibility of "bully pulpit" leadership: the responsibility to highlight and enforce priorities. By working internally, or with Congress, to discount or eliminate other staff

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[251] Sprenger, "With 2005 Road Maps Scrapped, OFT Focuses on QDR."

processes in favor of the *TPG*'s tasks, he may have allowed his process to keep its teeth, while simultaneously highlighting its importance. While the *QDR* might have been an unreasonable target, there was clear potential for such an effort. The effort did not happen, and likely reinforced perceptions that transformation was not as important as "business as usual."

Service Preeminence

If there is one fundamental phrase that characterizes the core of Rumsfeld's transformation vision since the 2001 *QDR,* it would be "pursuit of capabilities-based force." Concepts such as "Effects Based Operations," and goals to make organizations and systems "born joint," reinforced his intent to shift the military away from the threat and platform-centric concepts of the Cold War. And Rumsfeld looked to the services to make these goals reality.

But the services, with their "organize, train, and equip" responsibilities, are not the primary users of capabilities. The services are responsible for presenting forces and capabilities to regional warfighting commanders, who then blend the forces and capabilities in pursuit of their operational objectives. As such, the services would, by their responsibilities and natures, be platform-, and more importantly, budget-centric. The discussion then naturally degraded to classic "rice bowl" and budgetary-balance debates.

Nowhere is this more evident than in the debate between ground forces and airpower. Particularly in the earliest days of transformation, the Army demonstrated incredible insecurity about its relevance. Alternatively, the Air Force argued that its growing importance was almost self-evident. In the case of EBO, for example, many Army officers dismissed them as Air Force attempts to reinforce its ascendancy. [252] Aggressive airpower theorists counter-argued that the Army simply did not understand it.[253] In the end, both perspectives focused on the budgetary impacts of transformation, and missed the fundamental point.

There was a second, and perhaps more dangerous, by-product of a service-centric approach to transformation: the services' overwhelming focus upon force applications and strikes, versus attending to methods to defend against enemy countermeasures to these strikes. These countermeasures represent the "costs" of defense, and could cause decision makers to question specific platforms and approaches, thereby causing the applicable Service to defend its proposed system. Taken as a whole, the services ignored this aspect by failing to address the possibility that potential enemies could either through significant effort, or by low-cost means, nullify some advantages gained by transformation.

So by focusing on budgets and ignoring costs, the services addressed only half of the economics of defense concern discussed earlier in this paper. To its credit, OFT pointed out this problem in its 2004 *Strategic Transformation Appraisal*, but again, Rumsfeld failed to initiate specific actions to remedy the situation. In any case, as the services are ill-equipped to deal with the problem; it simply was not consistent with their responsibilities. This problem was only exacerbated by the watered-down *TPG* process discussed above.

However, the joint warfighting community may well be the forum in which to solve this problem. While the *TPG* placed responsibilities of concept development and experimentation upon the joint community as a

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[252] This assertion is based upon views expressed by fellow students when the author was a student at the US Army's Command and General Staff Officers' Course at Fort Leavenworth, Kansas from June 2002 through June 2003. It was further reinforced by the author's interaction with Army and Marine Corps officers while he served on the US Transportation Command, Operations Directorate staff. See also, Ralph Peters, "Bloodless theories, bloody wars," *Armed Forces Journal,* April 2006, http://www.armedforcesjournal.com/2006/04/1813800/ (accessed January 18, 2008). While Peters's work is usually more emotional than academic, he is clearly not alone in his thoughts.

[253] Benjamin S. Lambeth, *The Transformation of American Air Power* (Ithaca: Cornell University Press, 2000), pp. 309-313.

whole, US Joint Forces Command (USJFCOM) bore the most tangible parts of these responsibilities.[254] And as noted above, USJFCOM took, and continues to take, this responsibility seriously. The problem is that USJFCOM worked at the most strategic levels and paid little detailed attention to blending the seams between the services and the department's interagency and coalition partners. Again, with the weakened TPG construct, USJFCOM was allowed to become more of a think tank, and avoided the more difficult problems of excessive capability repetition and incomplete jointness among the services. In the end, very little attention was given to the problem of service-specific cultures and bureaucracies.

Iraq & Afghanistan

It is too easy to conclude simply that extended operations in Afghanistan, and particularly Iraq, derailed Rumsfeld's transformation programs. Indeed, some commentators have gone further by arguing that setbacks in both theaters have proven that transformation was inappropriate or has failed.255 Others have been more thoughtful by arguing that transformation focuses excessively on areas in which the United States already displays dominance, resulting in an expensive and counterproductive effort, usually to the detriment of interagency operations and ground forces.[256] This thesis's purpose is not to analyze the planning and operational flaws in Operations Enduring Freedom and Iraqi Freedom as a whole. However, there are two by-products of these operations worthy of note.

The first by-product is the strain that these operations, through both their controversy and their length, have placed upon the United States' allies and coalition partners. As a result, the United States learned from these operations that it cannot wholly rely upon its historical partners and allies for support in long-term stability and reconstruction operations. John Hillen predicted tensions of this type as early as 1997.[257] Andrew Michta, noted more recently that the United States and NATO missed opportunities immediately after September 11, 2001 to revitalize the NATO alliance:

> The United States' failure to use NATO as the framework for Operation Enduring Freedom in Afghanistan, after the alliance had invoked Article 5 in the wake of 9/11, missed an historic opportunity to revitalize the alliance. The operation, if executed by NATO, could have focused the alliance on a key new mission and exposed the allies to a shared risk on the battleground against the Taliban, as well as against the larger common international threat from Al-Qaeda. NATO further lost ground when Allies failed to agree on it playing a greater role in stabilizing Iraq.[258]

Discussions of whether the United States or its international partners are to blame, or whether there is a role for NATO in stabilization and reconstruction operations are less relevant to the core lesson learned from this situation. The fact is that there may be times during which the United States will have to "go it alone" and needs to be prepared for such possibilities. And as such, the US would need to increase the size of its ground forces and to expand the government's interagency skills—to include those in an expeditionary setting.The 2006 decision to expand the Army and Marine Corps reflects this fact, and brings to bear the second by-product of Iraq and Afghanistan. There is no doubt that operations in Iraq and Afghanistan have been, and promise to continue to be, expensive. But transformation is expensive too. Accordingly, transformation had to compete with these operations for resources, thereby turning Rumsfeld's transformation effort into little more than a one-shot opportunity. There were simply few additional resources the Pentagon could apply to adjust to the multiple course corrections and adaptations required for a successful transformation effort, let alone

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[254] Rumsfeld, *TPG*, pp. 23-24.
[255] Rigby.
[256] See Christopher M. Schnaubelt, "Whither the RMA?" *Parameters, US Army War College Quarterly*, Autumn 2007, pp. 95-107.
[257] John Hillen, "Superpowers Don't Do Windows," *Orbis*, 41, No. 2, (Spring 1997), pp. 241-258.
[258] Andrew Michta, "Transatlantic Troubles: Are they America's loss?" *National Interest* (Nov/Dec 2006), p. 63.

the major sea change Rumsfeld envisioned in 2001. Early in the Bush Administration, and especially after 9/11, the American public was agreeable to large defense budgets, so this was not a "guns versus butter" debate. Rather, it turned into a "guns versus newer, but sometimes unproven, guns" debate, and immediate success in Afghanistan and Iraq outweighed some of transformation's promises.

Revitalizing Transformation

Transformation is hardly a failure. Without question, Rumsfeld created a mindset that resulted in stunning successes during Operations Enduring Freedom and Iraqi Freedom's initial phases. Additionally, this same creativity has produced noteworthy results in the ensuing stability and reconstruction operations, albeit at a slower rate. Lesser known, but still noteworthy, successes in short-term humanitarian operations in Liberia (2003), Haiti (2004), Indonesia (2004-2005), and Pakistan (2005), illustrate that the highly agile, responsive joint forces Rumsfeld envisioned are of value.[259]

While Rumsfeld was unable to overcome enduring service cultures, the services did not singularly torpedo the effort. Evidence of continued interest in transformation, to include a "living" process, is clearly evident in the Army. To that end, Garstka insists, and Fix reaffirms, that the Army's transition toward modularity and conversion into Brigade Combat Teams was "nothing short of huge."[260] For its part, the Air Force remains on board, and the Navy continues to emphasize transformation. In fact, Richard Webster commented that the Navy might reinvigorate the roadmap process within the next year.[261]

But the dramatic—and unified—sea change that Rumsfeld outlined is somehow incomplete. The Department has certainly moved toward a more evolutionary approach. Probably reassuring to people like Frederick Kagan, the US never skipped a generation of weapons and technology. And even more reassuring to Kagan, there are indeed multiple suppliers of specific capabilities, especially in the coalition and interagency construct. [262] But to that end, the military's capacity to conduct such operations needs work, and the current Pentagon leadership is aware of this shortcoming.[263] The true joint, interagency, and coalition modularity is still a far off goal. To be sure, achieving such seamless integration will be long-term efforts on behalf of the Defense Department's interagency and coalition partners, but the specifics of such integration needs attention.

Whether these goals could have been achieved on a lasting basis via the highly directive, top-down leadership model employed by Rumsfeld in only eight years, especially in a bureaucracy as vast as the Pentagon, is a worthy question. The fact remains that Rumsfeld's vision and its processes were firmly linked to his and Admiral Cebrowski's personality. He never applied his leadership to effect the enduring organizational changes necessary to ensure their permanence—probably because there was an absence of a significant, strategic threat to the United States. Perhaps by avoiding significant organizational changes, Rumsfeld retained options to retreat from certain paths toward Transformation as the threats became clearer. And to that end, Fred Kagan's questions about transformation in a period without a clearly defined, strategic threat bear merit.264 In the end, revolutionary change will be unlikely without such a threat or a series of institutional changes from which the Department cannot turn back.

The following recommendations reflect the shortcomings outlined above, and could provide the permanent strategic organizational changes necessary to revitalize transformation. They are admittedly vast, and the details are extensive. As such, potential methods for their implementation

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[259] US Department of Defense, *Quadrennial Defense Review Report, 2006,* (Washington: US Department of Defense, 2006), pp. 13-14.
[260] Garstka, interview with author, February 15, 2008, and Fix, interview with author, February 15, 2008.
[261] Webster, interview with author, February 15, 2008.
[262] Kagan, *Finding the Target*.
[263] See Robert M Gates, "Landon Lecture (Kansas State University)," (remarks delivered in Manhattan, Kansas, November 26, 2007), http://www.defenselink.mil/utility/printitem.aspx?print=http://defenselink.mil/speeches (accessed November 29, 2007).
[264] Kagan, *Finding the Target*.

constitute this study's suggestions for further research.

First, ownership of transformation process needs to be shifted from the services to the capability users, namely the joint and regional combatant commands. The combatant commands (COCOMs), by their nature, are more capability-centric and less concerned with budgetary balances and specific weapon systems. They are in tune with demands of full-spectrum operations beyond major theater war, and also aware of potential challenges to their capabilities. When asked about this option, neither Pudas nor Garstka dismissed this approach as a possibility.[265] However, service-level staff officers were highly doubtful. The fact that the COCOMs are currently focused on issues in the two-to-four year range, versus the fifteen-to-twenty year range, was the most prevalent, and credible, argument against this approach.[266] Richard Webster offered a different perspective. He stated flatly that such an approach is unlikely because "DC is where the money is."[267] Nonetheless, this option bears further discussion. The better question might therefore be, "What changes would be required to make the regional COCOMs the driving force behind future defense transformation efforts?"

Similarly, roles of the functional COCOMs likes US Joint Forces Command, US Strategic Command, and US Transportation Command should be refined. The Defense Science Board's (DSB) 2006 recommendation to merge Defense Logistics Agency, service logistics and transportation commands, and US Transportation Command into a single Joint Logistics Command is a good start. The DSB's recommendation to make US Strategic Command primarily responsible for global command and control is also noteworthy.[268] USJFCOM should transition from the role of think tank to that of joint and interagency capabilities presentation for the regional COCOMs. Finally, National Defense University is a worthy organization in which to place concept development and other think-tank responsibilities.

Second, the 2004 Strategic Transformation Appraisal's recommendation to create a Goldwater-Nichols equivalent to the interagency process deserves significant attention.[269] There are many benefits of such an approach. Linking officer career progression to joint service has produced a corps of talented military leaders; the military, as well as larger the interagency community, can benefit from a similar approach. Just as the Chairman of the Joint Chiefs of Staff has been instrumental in blending service Cultures and mitigating competing demands, a single interagency authority can provide similar leadership. In parallel with this process, the US federal government should develop an expeditionary interagency capability from most, if not all, departments.

Third, the time is right for a frank discussion of service roles and missions, similar to what was achieved in the Key West Agreement of 1948. The Revolution in Military Affairs produced several new and distinct capabilities. The changing strategic context has increased the potential missions for the military as well as the interagency community. The services each have overlapping capabilities, particularly in aviation, unmanned vehicles, and logistics. This "Key West II" may not produce any new services, but should resolve issues of preeminence with these new and repetitive capabilities. Furthermore, this new agreement should address the roles of the COCOMs in comparison with the services, and could even address the interagency construct. The Fiscal Year 2008 National Defense Appropriation Act specifically calls for a thorough review of the services' roles and missions, with updates every four years. A press released issued by House Armed services Committee Chairman Representative Ike Skelton states:

> The roles and missions of our military services are largely unchanged since the
> Truman Administration and the Key West Agreement of 1948. After almost six
> decades, it's time to once again analyze the Defense Department's roles and missions,

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[265] Pudas, interview with author, February 14, 2008, and Garstka, interview with author, February 15, 2008.

[266] Fix, interview with author, February 15, 2008, and Rolleston, interview with author, February 15, 2008.

[267] Webster, interview with author, February 14, 2008.

[268] Defense Science Board, p. 43.

[269] OFT, *2004 Strategic Transformation Appraisal*, p. 18.

> identify the services' core competencies, discover the missions going unaddressed, and examine possible duplication of effort among the branches.[270]

This provision does not specifically call for the Department to address the services' roles in relation to the COCOMs, nor does it make the case for any new structures to address an interagency construct.[271] While this congressional action is clearly a step in the right direction, it would serve the nation well to broaden the discussion, especially in reference to expeditionary interagency operations.

Finally, future transformation needs to be responsive to the demands of coalition warfare. The highly contextual nature of coalitions and the fact that other countries cannot maintain large defense budgets are facts that a transformed US military cannot overlook. One area worthy of immediate attention is Network Centric Warfare (NCW). The "net" associated with NCW needs to be modified to gain congruence with older Western and Soviet-era systems. Furthermore, network designers should examine ways to allow "net" access with a shelf-life, so that temporary coalition partners would have access to essential information, but on a time-limited basis.

Conclusion

When asked whether transformation is alive or dead, Mr. Joseph Bonnet, the Joint Staff's Deputy Director for Joint force Development and Integration, flatly commented, "We're doing it." Then he added, "The bar has been lowered and we are in a phase of continuous improvement." He believes that enduring change has been realized. For example, Bonnet notes that it is "absolutely impossible for the services to field new weapons or concepts without highlighting their jointness." He points to significant advancements in capabilities-based planning. Furthermore, he believes that the greatest possibilities for continued transformation exist in areas that do not challenge the services' core missions. These areas include logistics, command and control, and bandwidth management, among others. As a final insight, he noted, "You can't be brilliant on a schedule; these things take time, and the Pentagon is a big building."[272]

In the end, the fact that transformation was so closely linked to Rumsfeld and Operations Enduring Freedom and Iraqi Freedom may have been its greatest weakness. Transformation did not fail because the US overlooked the possibilities of a protracted counter-insurgency campaign in Iraq, or that its allies have not been reliable in Afghanistan. Transformation is not dead because Osama Bin Laden remains at large. Such linkages fail to acknowledge the current RMA and also fail to allow for the course corrections that would accompany any transformational effort. Transformation is absolutely not a one-shot effort. Skepticism should accompany any claims to these effects.

Nonetheless, transformation is unguided at the moment. Even in this era of "recapitalization," a service-centric approach will continue to limit the possibilities offered by the current RMA unless difficult decisions are made in Washington. Few people would disagree with transformation's end state, and the need for an agile, jointly-focused, capabilities-based military. The challenge now is to apply the appropriate priority to transformation, and to create structures that put it irrevocably into the hands of those agencies most reliant upon its promises.

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[270] Cited in Association of the United States Army, "Legislative News – February 4, 2008: Some Good News but…" http://www.ausa.org/webpub/DeptGovAffairs.nsf/byid/RBOH-7BHTCS (accessed February 20, 2008).

[271] Ibid.

[272] Joseph C. Bonnet (Deputy Director for Joint Force Development and Integration, Operational Plans and Joint Forces Development Directorate, Joint Staff/J-7), interview with author, February 15, 2008.

Bibliography

Abate, Tom. "Special Military Group Looks Ahead to Fight America's Future Wars." San Francisco Chronicle, August 26, 2007, p. E1.

Air Force Doctrine Center. Air Force Basic Doctrine. Air Force Doctrine Document 1. Montgomery: Air Force Doctrine Centrer, 2003.

Alberts, Davis S. Information Age Transformation: Getting to a 21st Century Military. Washington: Department of Defense Command and Control Research Program, 2003.

Association of the United States Army. "Legislative News – February 4, 2008: Some Good News but .…" http://www.ausa.org/webpub/DeptGovAffairs.nsf/byid/RBOH-7BHTCS (accessed February 20, 2008).

Baldor, Lolita C. "Unmanned Planes A Key Tool In Iraq." Philadelphia Inquirer, January 2, 2008. Reported in the Department of Defense "Early Bird," January 2, 2008.

Batschelet, Allen W. "Effects-Based Operations for Joint War-fighters." Field Artillery 1 (May/June 2003) http://www.army.mil/prof_writing/volumes/volume1/june_2003/6_03_3_pf.html (accessed January 18, 2008).

Belasco, Amy, Mary Tyszkiewicz, and Stephen Daggett. "Appropriations and Authorization for FY 2002: Defense." Congressional Research Service Report for Congress Number RL 31005. Washington: Congressional Research Service, 2001.

Bennett, John T. "Interview: Ryan Henry, US Principal Deputy Undersecretary of Defense for Policy." Defense News, May 7, 2007. http://www.oft.osd.mil/library/library_files/article_576_Defense%20News%20interview%20with%20Ryan%20Henry.pdf (accessed January 15, 2008).

Berkowitz, Bruce. The New Face of War: How War Will be Fought in the 21st Century. New York: The Free Press, 2003.

Binnendijk, Hans, ed. Transforming America's Military. Washington: National Defense University Press, 2002.

Bolkcom, Christopher. "Air Force Transformation." Congressional Research Service Report for Congress Number RS20859. Washington: Congressional Research Service, 2006.

Bonnet, Joseph. 2008. Interview by author. February 15. Pentagon, Washington, DC.

Boot, Max. War Made New: Technology, Warfare, and the Course of History, 1500 to Today. New York: Gotham Books, 2006.

Bruner, Edward F. "Army Transformation and Modernization: Overview and Issues for Congress." Congressional Research Service Report for Congress Number RS20787. Washington: Congressional Research Service, 2003.

Bush, George W. "A Period of Consequences." Lecture, The Citadel, Charleston, SC, September 23, 1999. http://www.citadel.edu/pao/addresses/pres_bush.html (accessed September 27, 2007).

Cavas, Christopher P. "Pentagon May Close Transformation Office." Defense News, August 28, 2006.

Cebrowski, Arthur K. and John J. Garstka. "Network-Centric Warfare: Its Origin and Future." Proceedings (January 1998). http://www.oft.osd.mil/initiatives/ncw/docs/NCW_Ofigins_and_Future.doc (accessed January 26, 2008).

Cebrowski, Arthur K. "Special Briefing on Force Transformation." Newsbriefing, Washington, DC, November 27, 2001. http://www.au.af.mil/au/awc/awcgate/transformation/t11272001_t1127ceb.htm (accesed November 29, 2007).

Center for Strategic and Budgetary Assessments. "Transformation Strategy." http://www.csbaonline.org/2006-1/1.StrategicStudies/Transformation.shtml (accessed January 19, 2008).

Center for Strategic and International Studies (CSIS). American Military Culture in the Twenty-First Century. Washington: The CSIS Press, 2000.

CNN.com. "Army cancels Comanche helicopter." CNN.com, February 23, 2004. http://cnn.usnews.printthis.clickability.com/pt/cpt?action=cpt&title=CNN.com+-+Army+-+cancels+-+Comanche+-+helicopter.htm (accessed December 27, 2007).

Cohen, William S. Report of the Quadrennial Defense Review. Washington: Department of Defense, 1997.

Collmer, Sabine. "Information as a Key Resource: The Influence of RMA and Network-Centric Operations on the Transformation of the German Armed Forces." George C. Marshall European Center for Security Studies, Occasional Paper Series Number 8 (February 2007).

Congressional Budget Office. Evaluating Military Compensation. Publication Number 2665. Washington: Congressional Budget Office, 2007.

Czelusta, Mark. "Global Strike Task Force and Stryker Brigade Combat Team: Prospects for Integration in the Forcible Entry Mission." Masters thesis. Fort Leavenworth: Command and General Staff College, 2003.

Defense Science Board. Defense Science Board Summer Study on Transformation: A Progress Assessment, Vol. 1. Washington: Department of Defense, 2006.

Department of Defense. "Arthur K. Cebrowski: Director, Force Transformation." Official Department of Defense Biography. http://oft.osd.mil/library/library_files/document_338_cebrowski_with_pic.doc (accessed October 14, 2007).

Department of Defense. "Conduct of the Persian Gulf War, Final Report to Congress." Washington: Department of Defense, 1992.

Department of Defense. "Department of Defense Budget for FY 2000." News release. Washington: Department of Defense, 1999. http://www.defenselink.mil/releases/release.aspx?releaseid=1967 (accessed September 24, 2007).

Department of Defense. "Fiscal 2004 Department of Defense Budget Release." News release. Washington: Department of Defense, 2003. http://www.defenselink.mil/releases/release.aspx?releaseid=3615 (accessed September 24, 2007).

Department of Defense. "Fiscal 2005 Department of Defense Budget Release." News release. Washington: Department of Defense, 2004. http://www.defenselink.mil/releases/release.aspx?releaseid=7046 (accessed September 24, 2007).

Department of Defense. "Fiscal 2008 Department of Defense Budget Released." News release No. 129-07. Washington: Department of Defense, 2007. http://www.defenselink.mil/releases/ (accessed September 24, 2007).

Department of Defense. Joint Staff/J-7. "Joint Capability Areas." PowerPoint presentation. http://www.dtic.mil/futurejointwarfare/cap_areas.htm (accessed November 20, 2007).

Department of Defense. "PBD 753." Washington: Department of Defense, 2004.

Department of Defense. "President Bush's FY 2006 Defense Budget." News release. Washington: Department of Defense, 2005. http://www.defenselink.mil/releases/ (accessed September 24, 2007).

Department of Defense. "President Bush's FY 2007 Defense

Budget." News release. Washington: Department of Defense, 2006. http://www.defenselink.mil/releases/ (accessed September 24, 2007).

Department of Defense. Quadrennial Defense Review Report. Washington: Department of Defense, 2006.

Department of Defense. Quadrennial Defense Review Report: September 30, 2001. Washington: Department of Defense, 2001.

Department of Defense. Transformation Planning Guidance. Washington: Department of Defense, 2003.

Donnelly, John M. "Small Wars, Big Changes." CQ Weekly, January 28, 2008, cover story, p. 252.

Donnelly, Tom. "Why did Donald Rumsfeld fail?" Armed Forces Journal, January 2007. http://www.armedforcesjournal.com/2007/01/2410339/ (accessed September 30, 2007).

Dorobek, Christopher J. "Editorial: A poor remembrance." Federal Computer Week, September 11, 2006.

Eland, Ivan. "Defense Reform is Dead." Black News, August 30, 2001. http://www.independent.org/printer.asp?page=%Fnewsroom%Farticle%2Easp?id=1099 (accessed July 17, 2007).

Fix, Robert. 2008. Interview by author. February 15. Pentagon, Washington, DC.

Garamone, Jim. "Quadrennial Review Allows DOD to Make 'Vector Changes.'" American Forces Press Service, February 3, 2006. http://www.defenselink.mil/utility/printitem.aspx?print (accessed December 13, 2007).

Garstka, John. Interview by author. February 15, 2008. Pentagon, Washington, DC.

Gates, Robert M. "Landon Lecture (Kansas State University)." Remarks, delivered in Manhattan, Kansas, November 26, 2007. http://www.defenselink.mil/utility/printitem.aspx?print=http://defenselink.mil/speeches (accessed November 29, 2007).

Gilmore, J. Michael. Testimony before the Subcommittee on Projection Forces, Committee on Armed Services, United States House of Representatives, Washington, DC, July 19, 2005. Congressional Budget Office Document, "The Navy's DD(X) Destroyer Program." Washington: Congressional Budget Office, 2005.

Hillen, John and Lawrence Korb. Future Visions for US Defense Policy: Four Alternatives Presented as Presidential Speeches. New York: Council on Foreign Relations, 2000.

Hillen, John. "Superpowers Don't Do Windows." Orbis 41, No. 2 (Spring 1997), pp. 241-258.

Isenberg, David and Ivan Eland. "Empty Promises: Why the Bush Administration's Half-Hearted Attempts at Defense Reform Have Failed." Policy Analysis 442 (June 11, 2002), pp. 1-20.

Joint Defense Capabilities Study Team. "Joint Defense Capabilities Study, Final Report." Washington: Department of Defense, 2003.

Jones, James L. "Statement to the House Armed Services Committee." July 12, 2001. Washington: House Armed Services Committee, 2001.

Jumper, John. "Global Strike Task Force: A Transforming Concept, Forged by Experience." Aerospace Power Journal 15, No. 1 (Spring 2001), pp. 24-33.

Klein, John. E-mail to author. February 5, 2008.

Kagan, Frederick W. Finding the Target: The Transformation of American Military Policy. New York: Encounter Books, 2006.

Kozaryn, Linda D. "Demystifying 'Transformation.'" American Forces Information Service, August 14, 2002. http://www.au.af.mil/au/awc/awcgate/transformation/demystifying.htm (accessed November 29, 2007).

Krauthhammer, Charles. "The Unipolar Moment." Foreign Affairs, America and the World 1990/91. http://www.foreignaffairs.org/19910201faessay6067/charles-krauthammer/the-unipolar-moment (accessed January 19, 2008).

Krepinevich, Andrew, Jr. "Why No Transformation?" Joint Forces Quarterly 23 (Autumn/ Winter 2000), pp. 97-101.

Lambeth, Benjamin S. NATO's Air War for Kosovo: A Strategic and Operational Assessment. Santa Monica: RAND, 2001.

Lambeth, Benjamin S. The Transformation of American Air Power. Ithaca: Cornell University Press, 2000.

Macgregor, Douglas A. Breaking the Phalanx: A New Design for Landpower in the 21st Century. Westport: Praeger, 1997.

Macgregor, Douglas A. Transformation Under Fire: Revolutionizing how America Fights. Westport: Praeger, 2003.

Mahnken, Thomas G., and James R. FitzSimonds. The Limits of Transformation: Officer Attitudes toward the Revolution in Military Affairs. Newport: Naval War College, 2003.

Mandeles, Mark D. The Future of War: Organizations as Weapons. Washington: Potomac Books, 2005.

Matthews, William, Gopal Ratnam, and Megan Scully. "Bulk of DOD Budget Cuts Don't Hit Until 2007 and Beyond." DefenseNews.com. http://www.defensenews.com/story.php?F=592155&C=america (accessed December 16, 2007).

McClintock, Bruce H. "Transformation Trinity: Vision, Culture, Assessment." Joint Forces Quarterly (Autumn 2000), pp. 27-31.

McNaugher, Thomas L. "The Real Meaning of Military Transformation: Rethinking the Revolution." Foreign Affairs 86 (January/February 2007), pp. 140-147.

Meilinger, Phillip S. "A History of Effects-Based Air Operations." The Journal of Military History 71, No. 1 (January 2007), pp. 139-167.

Metz, Steven. "America's Defense Transformation: A Conceptual and Political History." Defence Studies 6, No. 1 (March 2006), pp. 1-25.

Meyers, Richard B. Capstone Concept for Joint Operations, Version 2.0. Washington: Chairman of the Joint Chiefs of Staff, 2005.

Meyers, Richard B. The National Military Strategy of the United States of America. Washington: Chairman of the Joint Chiefs of Staff, 2004.

Michta, Andrew A. "Transatlantic Troubles: Are they America's Loss?" The National Interest (November/ December 2006), pp. 62-66.

Miles, Donna. "QDR Vectors for Defense Transformation." American Forces Press Service, February 3, 2006. http://www.defenselink.mil/ (accessed December 13, 2007).

Moran, Michael. "US Army Force Restructuring, 'Modularity," and Iraq." Council on Foreign Relations, September 14, 2007. http://www.cfr.org/publication/14412/us_army_force_restructuring_modularity_and_iraq (accessed September 20, 2007).

Muradian, Vago. "Interview with Terry Pudas." Defense News, January 22, 2007. http://www.oft.osd.mil/library/library_files/article_532_Defense%20News%20Interview%2022%20January%202007.doc (accessed January 12, 2008).

Nardulli, Bruce R., Walter L. Perry, Bruce Pirnie, John Gordon IV, and John G. McGinn. Disjointed War: Military Operations in Kosovo, 1999. Santa Monica: RAND, 2002.

National Defense Panel. Transforming Defense: National Security in the 21st Century. Washington: Department of Defense, 1997.

Neal, Derrick J. "Do We Really Understand What Is Meant by Transformational Change for Defence?" Defence Studies 6, No. 1 (March 2006), pp. 73-96.

North Atlantic Treaty Organization. "Allied Command Transformation, Transformation Network." http://www.act.nato.

int/content.asp?pageid=200 (accessed January 17, 2008).

Office of Force Transformation, Office of the Secretary of Defense. 2004 Strategic Transformation Appraisal. Washington: Department of Defense, 2005.

Office of Force Transformation, Office of the Secretary of Defense. "Elements of Defense Transformation." Washington: Department of Defense, 2004.

Office of Force Transformation, Office of the Secretary of Defense. The Implementation of Network-Centric Warfare. Washington: Department of Defense, 2005.

Office of Force Transformation, Office of the Secretary of Defense. Military Transformation: A Strategic Approach. Washington: Department of Defense, 2003.

Office of Force Transformation. Office of the Secretary of Defense. "The Strategic Transformation Appraisal for FY-2004." Washington: Department of Defense, 2003.

Office of the Under Secretary of Defense (Comptroller). National Defense Budget Estimates for FY 2007. Washington: Department of Defense, 2006.

O'Keefe, Sean, Frank B. Kelso II, CE Mundy, Jr. …From the Sea. Washington: Department of the Navy, 1992. http://www.au.af.mil/au/awc/awcgate/navy/fromsea/fromsea.txt (accessed November 30, 2007).

O'Rourke, Ronald. "Defense Transformation: Background and Oversight Issues for Congress." Congressional Research Service Report for Congress, Number RL32238. Washington: Congressional Research Service, 2006.

O'Rourke, Ronald. "Naval Transformation: Background and Issues for Congress." Congressional Research Service Report for Congress, Number RS20851. Washington: Congressional Research Service, 2003.

Orszag, Peter R. "Estimated Cost of the Administration's Proposal to Increase the Army's and the Marine Corps's Personnel Levels." Washington: Congressional Budget Office, 2007.

Owens, Bill, and Ed Offley. Lifting the Fog of War. Baltimore: The Johns Hopkins University Press, 2001.

Peters, Ralph. "Bloodless theories, bloody wars." Armed Forces Journal, April 2006. http://www.armedforcesjournal.com/2006/04/1813800/ (accessed January 18, 2008).

Powell, Colin L., and Joseph E. Perisco. My American Journey. New York, Random House, 1995.

Project for the New American Century. Rebuilding America's Defenses: Strategy, Forces and Resources for a New Century. Washington: Project for a New American Century, 2000.

Pudas, Terry. "Embedding Transformation: Cultural change will cross departmental lines." Defense News, September 18, 2006, p. 21.

Pudas, Terry. Interview by author. February 14, 2008. National Defense University, Washington, DC.

Reynolds, Kevin. Defense Transformation: To What, For What? Carlisle: Strategic Studies Institute, 2006.

Rigby, Bill. "US Military "transformation" is dead: analysts." Reuters, December 7, 2006. http://www.reuters.com/articlePrint?articleId=USN0725779820061207 (accessed July 25, 2007).

Roche, James G. "Transforming the Air Force." Joint Forces Quarterly (Autumn/Winter 2001-2002), pp. 9-14.

Rogin, Josh. "Defense Transformation Searches for New Identity." Federal Computer Week, April 16, 2007. http://www.oft.osd.mil/_library/library_files/article_559_Federal%20Computer%20Week.doc (accessed January 14, 2008).

Rolleston, Moreton. Telephone interview by author. November 27, 2007.

Rolleston, Moreton. Interview by author. February 15, 2008.

Pentagon, Washington, DC.

Rumsfeld, Donald. "21st Century Transformation." Lecture, National Defense University, Washington, DC, January 31, 2002. http://www.defenselink.mil/speeches (accessed September 28, 2007).

Rumsfeld, Donald. Transformation Planning Guidance. Washington: Department of Defense, 2003.

Shalikashvilli, John M. Joint Vision 2010. Washington: Office of the Chairman of the Joint Chiefs of Staff, 1997.

Shanker, Thom. "Joint Chiefs Chairman Looks Beyond Current Wars." New York Times, October 22, 2007, p. 8.

Shelton, Henry H. Joint Vision 2020. Washington: Chairman of the Joint Chiefs of Staff, 2000.

Shinseki, Eric. Quotation cited on the United States Air Force Air War College, "Gateway to the Internet." "Transformation of War & US Military." http://www.au.af.mil/au/awc/awcgate/awc-chng.htm#army (accessed January 17, 2008).

Schnaubelt, Christopher M. "Whither the RMA?" Parameters 37, No. 3 (Autumn 2007), pp. 95-107.

Smith, Rickey. 2008. Telephone interview by author. February 4.

Sprenger, Sebastian. "With 2005 Transformation Road Maps Scrapped, OFT Focuses on QDR." Inside the Pentagon, August 4, 2005.

Taylor, William J. and James Blackwell. "The Ground War in the Gulf." Survival 33 (May/June 1991), pp. 230-245.

Tiron, Roxana. "Military-transformation agency at crossroads after Cebrowski." TheHill.com, September 15, 2005. http://thehill.com/the-executive/military-transformation-agency-at-crossroads-after-cebrowski-2005-09-15.html (accessed January 28, 2008).

Tucker, David. Confronting the Unconventional: Innovation and Transformation in Military Affairs. Carlisle: Strategic Studies Institute, 2006.

United States Air Force. "Air Force Posture Statement 2002." Washington: Department of the Air Force, 2005.

United States Air Force. Air Force Roadmap 2006 > 2025. Washington: Department of the Air Force, 2006.

United States Air Force. "Posture Statement 2000." Washington: Department of the Air Force, 2000.

United States Air Force. "United States Air Force Posture Statement 2001." Washington: Department of the Air Force, 2001.

United States Air Force. "US Air Force Posture Statement 2005." Washington: Department of the Air Force, 2005.

United States Air Force. "US Air Force Posture Statement 2006." Washington: Department of the Air Force, 2006.

United States Air Force. The US Air Force Transformation Flight Plan. Washington: Department of the Air Force, 2003.

United States Air Force. The US Air Force Transformation Flight Plan. Washington: Department of the Air Force, 2004.

United States Army. 2004 Army Transformation Roadmap. Washington: Department of the Army, 2004.

United States Army. United States Army Transformation Road-map 2003. Washington: Department of the Army, 2003.

United States Government Accountability Office, "MILITARY TRANSFORMATION: Clear Leadership, Accountability, and Management Tools Are Needed to Enhance DOD's Efforts to Transform Military Capabilities." GAO Report 05-70. Washington: Government Accountability Office, 2004.

United States Joint Forces Command. "Frequently Asked Questions." http://www.jfcom.mil/about/experiments/mco2/faq.htm (accessed November 28, 2007).

United States Joint Forces Command. "Effects Based Operations." http://www.jfcom.mil/about/glossary.htm#E (accessed October 16, 2007).

United States Joint Forces Command. http://www.dtic.mil/futurejointwarfare/experimentation/htm (accessed December 22, 2007).

United States Joint Forces Command. J-7. "JOpsC Status Update." PowerPoint presentation, February 15, 2008. www.dtic.mil/futurejointwarfare/concepts/status.ppt#3209 (accessed February 26, 2008).

United States Joint Forces Command. Joint Transformation Roadmap. Norfolk: United States Joint Forces Command, 2004.

United States Navy. "2002 Program Guide, Vision… Presence… Power." http://www.navy.mil/navydata/policy/vision/vision02 (accessed November 30, 2007)

United States Navy. A Cooperative Strategy for 21st Century Seapower. Washington: Department of the Navy, 2005. http://www.au.af.mil/au/awc/awcgate/maritime/maritime_strat_oct07.pdf (accessed February 20, 2008)

United States Navy. Naval Power 21. Washington: Department of the Navy, 2002.

United States Navy. Naval Transformation Roadmap 2003: Assured Access & Power Projection …From the Sea. Washington: Department of the Navy, 2003.

United States Navy. Naval Transformation Roadmap: Power and Access…From the Sea. Washington: Department of the Navy, 2004.

United States Navy. Sea Power for a New Era. Washington: Department of the Navy, 2005. http://www.au.af.mil/au/awc/awcgate/awc-futr.htm#marinevision (accessed February 20, 2008).

United States Navy. Vision, Presence, Power. Washington: Department of the Navy, 2005. http://www.au.af.mil/au/awc/awcgate/awc-futr.htm#marinevision (accessed February 20, 2008)

Vego, Milan N. "Effects Based Operations: A Critique." Joint Forces Quarterly 41 (2nd Quarter 2006), pp. 51-57.

Wayne, Leslie. "So Much for the Plan to Scrap Old Weapons." New York Times, December 22, 2002. http://query.nytimes.com/gst/fullpage.htmlres+9C0CE6D61E3DF931A15751C1A9649 (accessed December 27, 2007).

Webster, Richard. 2008. Interview by author. February 14. Alexandria, Virginia.

Wilson, Clay. "Network Centric Warfare: Background and Oversight Issues for Congress." Congressional Research Service Report for Congress Number RL32411. Washington: Congressional Research Service, 2004.

The White House. A National Security Strategy For a New Century. Washington: The White House, 1999.

White, Thomas E. and Eric Shinseki. "A Statement on the Posture of the United States Army 2002." Presented to the committees and subcommittees of the United States Senate and the House of Representatives of the 107th Congress. Washington: Office of the Chief of Staff of the United States Army, 2002.

Acronyms

9/11	September 11, 2001
AFRICOM	Africa Command
AWOL	Absent Without Leave
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CBO	Congressional Budget Office
CBRNE	Chemical, Biological, Radiological, and Nuclear Effects
CCJO	*Capstone Concept for Joint Operations*
CJCS	Chairman of the Joint Chiefs of Staff
COCOM	Combatant Command
CONOPS	Concepts of Operations
CRS	Congressional Research Service
CSIS	Center for Strategic and International Studies
DARPA	Defense Advanced Research Projects Agency
DC	District of Columbia
Dept	Department
DOD	Department of Defense
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities
DSB	Defense Science Board
EBO	Effects Based Operations
EUCOM	European Command
FY	Fiscal Year
GAO	Government Accountability Office
Govt	Government
GPS	Global Positioning System
GSTF	Global Strike Task Force
JCA	Joint Capability Areas
JFC	Joint Forces Commander
JOC	Joint Operating Concept
JOpsC	Joint Operations Concept
JV 2010	*Joint Vision 2010*
JV 2020	*Joint Vision 2020*
NATO	North Atlantic Treaty Organization
NCW	Network Centric Warfare
NORTHCOM	Northern Command
NSPS	National Security Personnel System
NVG	Night Vision Goggles
OFT	Office of Force Transformation
OODA	Observe, Orient, Decide, Act
PACOM	Pacific Command
PPBE	Planning, Programming, Budgeting and Execution
POM	Program Objective Memorandum
QDR	*Quadrennial Defense Review*
RAND	Research and National Defense
RMA	Revolution in Military Affairs
SC	South Carolina
SOCOM	Special Operations Command
SOUTHCOM	Southern Command
SRATCOM	Strategic Command
TPG	*Transformation Planning Guidance*
TRANSCOM	Transportation Command
UAV	Unmanned Aerial Vehicle
US	United States
USAF	United States Air Force
USJFCOM	United States Joint Forces Command
USMC	United States Marine Corps
UUV	Unmanned Underwater Vehicle

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